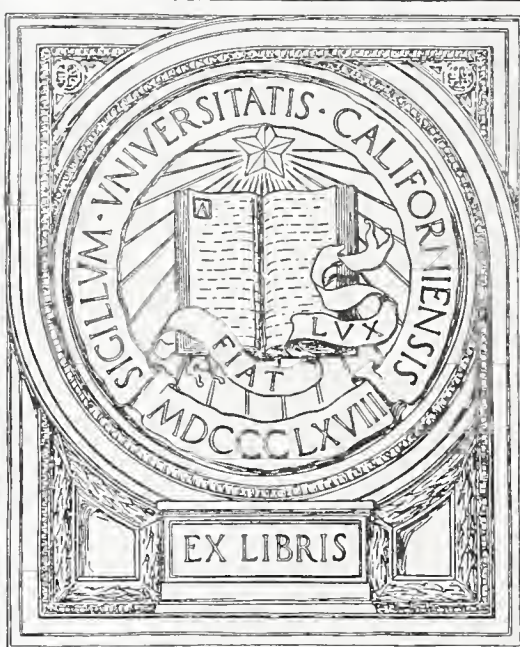



UNIVERSITY OF CALIFORNIA
MEDICAL CENTER LIBRARY
SAN FRANCISCO





Digitized by the Internet Archive
in 2017 with funding from
The National Endowment for the Humanities and the Arcadia Fund

<https://archive.org/details/journalofarkansa58unse>

THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

JUNE, 1961

Vol. 58 No. 1

FORT SMITH, ARKANSAS

U.C. MEDICAL CENTER LIBRARY

JUN 27 1961

San Francisco, 22

162147

*New Product Announcement

a significant
achievement in
corticosteroid research

HALDRONE™

(paramethasone acetate, Lilly)

- predictable anti-inflammatory effect
- low incidence of untoward reactions

Available in
bottles of
30, 100,
and 500

Tablets Haldrone, 1 mg., Yellow
(scored)

Tablets Haldrone, 2 mg., Orange
(scored)

Lilly

QUALITY RESEARCH INTEGRITY

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U. S. A.

With proper medical management and adequate control of seizures, epileptic persons may lead productive, functioning lives.^{1,2} To implement this goal, many clinicians rely on DILANTIN for outstanding control of grand mal and psychomotor attacks. "In most cases DILANTIN is the drug of choice.... Toxic symptoms are uncommon and when they do appear they are usually readily controlled; the drug is inexpensive, and widely available."³ DILANTIN Sodium (diphenylhydantoin sodium, Parke-Davis) is available in several forms, including Kapseals, 0.03 Gm. and 0.1 Gm., bottles of 100 and 1,000.

other members of the PARKE-DAVIS FAMILY OF ANTICONVULSANTS for grand mal and psychomotor seizures: PHELAN[®]

Kapseals (Dilantin 100 mg., phenobarbital 30 mg., desoxyephedrine hydrochloride 2.5 mg.), bottles of 100.

for the petit mal triad: MILONTIN[®] Kapseals (phen-suximide, Parke-Davis) 0.5 Gm., bottles of 100 and 1,000; Suspension, 250 mg. per 4 cc., 16-ounce bottles • CELONTIN[®] Kapseals (methsuximide, Parke-Davis) 0.3 Gm., bottles of 100. ZARONTIN[®] Capsules (ethosuximide, Parke-Davis) 0.25 Gm., bottles of 100. See medical brochure for details of administration and dosage.

DILANTIN[®]
SODIUM KAPSEALS[®]
**HELPS KEEP HIM
IN THE
MIDST OF THINGS**

51061

(1) Carter, S.: *M. Clin. North America* 37:315, 1953.

(2) Maltby, G. L.: *J. Maine M. A.* 48:257, 1957.

(3) Crawley, J. W.: *M. Clin. North America* 42:317, 1958.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan



**THIS
TRACK
OFFICIAL
HAS
EPILEPSY...**

THE *Journal* OF THE *Arkansas* *Medical Society*

Owned by
THE ARKANSAS MEDICAL SOCIETY
And Published Under Direction of the Council

ALFRED KAHN, JR., M.D., Editor
1300 West Sixth Street Little Rock, Arkansas
MR. PAUL C. SCHAEFER, Business Manager
218 Kelley Bldg. Fort Smith, Arkansas
LITTLE ROCK BUSINESS OFFICE
114 E. Second St. Little Rock, Arkansas

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY
WM. A. SNODGRASS, JR., President..... Little Rock
H. KING WADE, JR., President-Elect..... Hot Springs
M. E. BLANTON, First Vice-President..... Jonesboro
CHARLES W. REID, Second Vice-President..... Pine Bluff
L. E. DREWREY, Third Vice-President..... Camden
H. ELVIN SHUFFIELD, Secretary..... Little Rock
W. R. BROOKSHER, Secretary Emeritus..... Fort Smith
BEN N. SALTZMAN, Treasurer..... Mountain Home
C. LEWIS HYATT, Speaker, House of Delegates, Monticello
J. P. PRICE, JR., Vice Speaker,
House of Delegates..... Monticello
MR. PAUL C. SCHAEFER, Executive Secretary,
P. O. Box 1345..... Fort Smith

COUNCILORS
First District JOE VERSER..... Harrisburg
ELDON FAIRLEY..... Osceola
Second District HUGH R. EDWARDS..... Searcy
PAUL GRAY..... Batesville
Third District K. E. BEATON..... Wynne
FRED B. STONE..... Stuttgart
Fourth District H. W. THOMAS..... Dermott
T. E. TOWNSEND..... Pine Bluff
Fifth District J. L. DEDMAN..... Camden
GEORGE C. BURTON..... El Dorado
Sixth District JOHN P. WOOD..... Mena
KARLTON H. KEMP..... Texarkana
Seventh District MARTIN EISELE..... Hot Springs
J. W. KENNEDY..... Arkadelphia
Eighth District ROBERT D. JONES..... Little Rock
BILL DAVE STEWART..... Little Rock
Ninth District ROSS FOWLER..... Harrison
STANLEY APPLGATE..... Springdale
Tenth District L. A. WHITTAKER..... Fort Smith
C. C. LONG..... Ozark

The Advertising policy of this JOURNAL is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

EXCLUSIVE PUBLICATION — Articles are accepted for publication on the condition that they are contributed solely to this JOURNAL.

COPYRIGHT 1961—By The JOURNAL of the Arkansas Medical Society.

NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to the membership.

● 85th ANNUAL SESSION

President's Address.....	1
Proceedings	5

● 37th ANNUAL SESSION WOMAN'S AUXILIARY

Proceedings	31, 32
-------------------	--------

● FEATURES

Editorial.....	33
Medicine in the News.....	34
Announcements	37
Proceedings of Societies.....	37
Obituary	38
Personal and News Items.....	38
New Members.....	39
Woman's Auxiliary.....	41
Book Reviews.....	42
Tuberculosis Abstracts.....	42

Notice on Form 3579-P to be sent to Arkansas Medical Society, 218 Kelley Building, Fort Smith, Arkansas. Published monthly under direction of the Council, Arkansas Medical Society, Vol. 58, No. 1. Subscriptions \$3.00 a year. Single copies 50 cents. Entered as a second class matter, May 1, 1955, at the post office at Little Rock, Arkansas, under the Act of Congress of March, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 1, 1918. Second-class postage paid at Little Rock, Arkansas.



William A. Snodgrass, Jr., M.D.
Little Rock
PRESIDENT
ARKANSAS MEDICAL SOCIETY
1961-1962

The JOURNAL

OF THE ARKANSAS MEDICAL SOCIETY

PUBLISHED MONTHLY UNDER DIRECTION OF THE COUNCIL

Volume 58

JUNE, 1961

Number 1

85th Annual Session

Arkansas Medical Society

PRESIDENT'S ADDRESS

J. J. MONFORT*

Members of the Arkansas Medical Society and honored guests, it gives me great pleasure to welcome you to the 85th annual session of the Arkansas Medical Society Meeting here in Little Rock. Pulaski County, the Pulaski County Medical Society and your local host committee headed by Dr. Joe Norton have arranged a wonderful program for your entertainment. The Ladies Committee headed by Mrs. Mona Lawson has arranged a program for our wives beyond all expectations.

I would like to call attention to the excellent scientific program which was arranged by the Program Committee headed by John Wood of Mena. They have done a superb job which has taken many, many hours of hard work and I recommend you participate in the program as much as possible. It will be time well spent. In order to see that all of you have time to do the things you wish to do, we have reduced the number of speeches from 14 to 9 on the scientific subjects.

I wish to congratulate the Woman's Auxiliary of the Arkansas Medical Society and its President, Mrs. C. C. Long, who is known to most of us as Esther. She has done a wonderful job traveling all over Arkansas many times during the "tortured

truth" concerning the Forand Bill and lately of course the King-Anderson Bill with the Social Security aspect attached. She has done this at Auxiliary meetings, PTA Associations, and other groups of various kinds. When I addressed you last April at the Annual Banquet in Pine Bluff at the time of my inauguration, I gave you the promise to do the very best that I could for all the members of the Society, as I was representing all of you. This I have done although because of limited time and the fact that I have been limited in my traveling and my number of hours because of a coronary insufficiency some time ago I have not traveled as much as I would have like to have done.

The committees have been very active. The reports are printed in a recent issue of the Arkansas Medical Society Journal. I recommend you study them, if you have not already done so. May I call your attention to a few of them that may have been especially busy. If you want to know what the Arkansas Medical Society has done, you should read this published program of the Committees. Most especially I want to recommend the Special Fee Committee headed by Fount Richardson composed of 30 members representing all branches of the practice of medicine. They have had

*Batesville.

PRESIDENT'S ADDRESS

many long hours and many weary sessions. They have had 5 schedules to consider: Medicare, home town care for veterans, rehabilitation, regular Blue Shield and Blue Shield for those over 65 years of age. They have accomplished much in the past year and still have problems ahead. Only the members of this committee will ever realize the effort they have put forth to try to help save the private practice of medicine. There are many committees: the Rural Health Committee, the Committee on Aging, Committee on Insurance, and others that I would like to mention in special relation to this address, but there is not time to do so. There are other committees besides them who have done an excellent bit of work and I wish to thank each and every one of them for doing so.

There are at least 37 or more committees to promote **your** work for the benefit of the patient in Arkansas and for **your** benefit. Most of these are men who serve from 1 to 5 years, appointed by the Arkansas Medical Society and/or by the Council of the Arkansas Medical Society. They all deserve thanks for a job "well done". You have all practiced your profession under the best of circumstances for your patients and yourselves — and **please** remember that

they helped your patients and you — and may I plead that **you** gain interest in helping others to maintain this ideal care of the sick, the aged, the children, and the "well" person who wants to remain "well"?

Your President, Secretary and the Council Chairman have represented you on the Nominating Committee for a new Dean of the Medical School. We believe that the Ideal Dean should be:

- (1) Academically qualified.
- (2) Able and willing to help Mr. Whaley in talking to students, doctors, the legislature and the public.
- (3) Re-establish the good will of the doctors over the state towards the Medical Center.
- (4) Establish a balance of equity between research and teaching—with no prejudice as regards either—but a **balance!**

I am very proud of my adopted state of Arkansas. There were times when I could have left had I so desired, but you should consider that we have enjoyed the honor of two distinguished senators in the United States Senate both heading major committees and enjoying enviable positions in the world of politics. In the House of Congress no other state in the Union has as many important committee chairman as does Arkansas with 5 major committees being chairmaned by distinguished sons. In particular I would like to mention the name of the Honorable Wilbur D. Mills who is a Congressman from my own district; he is Chairman of the House Ways and Means Committee who more or less "single-handed" preserved the private practice of medicine last year. He tells me that he intends to do so unless the demands of the constituency in the Second District says otherwise. There will be more about this a little later in this address.

We are well known in the Arkansas Academy of General Practice which has supplied two National Presidents in its thirteen years of existence, Bob Robins and Fount Richardson, and many other members who have been very active in this association.

Of course, we have made mistakes, we have left stones unturned, we would do somethings differently if we could do them over again. Please do not criticize us too



J. J. Monfort makes his farewell speech as president of the Arkansas Medical Society. President's Banquet, Tuesday, April 18th, Grand Ballroom, Hotel Marion.

PRESIDENT'S ADDRESS

severely but put your shoulder to the wheel and start pushing more of the load than you have been doing. Your officers are all ready and willing to share with you the work as well as the play.

I would like to mention to you the great number of hours of work and mental consideration of the Council of the Arkansas Medical Society. These men are your elected representatives; there are twenty of them, and that does not include the past presidents of whom there are several and whom you will meet later tonight. If you have ever seen a bunch of prima donnas, you would know what I mean by the Council of the Arkansas Medical Society. This is not to make a derogatory comment about them. They are individualists just as you and I are, as each individual of the Arkansas Medical Society, but all in all the discussion that goes forth from the Council is for your benefit, but more particularly for the benefit of your patients; rarely have I seen a session of the Council in which the consideration of the patient was not the most important consideration which was made. This includes the Fee Committee reports and all other reports from the Council. If any group of men were ever considered as a charitable group who were looking after the welfare and medical condition of others it is your Council of the Arkansas Medical Society. They are dedicated men who spend their time and money to come here and represent you. I hope that you will congratulate them in the next 24 hours for all the work they have done, for they have done more than you realize.

In the recent weeks we have received word from that most excellent committee chairman, C. Randolph Ellis who is Chairman of the Liaison Committee with the Welfare Department that Mr. Carl Adams the head of the Department of Welfare stated recently that the Welfare Department could not set up an account for each physician in the state. He suggested that in each town they form a clinic and that these recipients of the Welfare Department should deal directly with the clinic. On July 1st, 1961 the clinic facilities must be offered over the entire state just as it is now at the University of Arkansas Medical Center and two other places. This is a

proposition which I consider we cannot accept, but we cannot pre-judge this plan until Mr. Adams presents it. It indicated on face value that the Welfare Department does not wish to get into the bookkeeping of dealing with individual recipients. Consequently, I called a friend of mine in Oklahoma where they have had for the past three years a Welfare Department Program, and they tell me they have more or less unlimited money which we cannot say in Arkansas. The patients after signing a sort of emergency certificate which is almost a life and death affidavit receive three weeks hospitalization which is renewable on request of the physician. They get good fees in fact this particular doctor told me they were a little above average. It includes house calls, nursing home care, and some emergency office consideration. We have the same type of program through the Mills-Kerr Bill but we understand that recently although the Legislature of the State of Arkansas appropriated 2 million dollars to match the three to one donation of the Federal Government and of the Mills-Kerr Law, the Comptroller of the state, stated that we only had \$600,000 available and accordingly \$1,800,000 is what we would get under the existing circumstances. Mr. Adams has told our secretary, Dr. Elvin Shuffield, that this puts up a problem considering that we have to deal with medical and surgical benefits, diagnostic facilities, glasses, dental care, nursing home care, and other medical care, so that only approximately \$60,000 to \$80,000 will be available for surgical benefits **OR** diagnostic facilities. This is something that we must see about because we need to know the exact situation as regards this amount of money, compared to what was appropriated by the Legislature. Furthermore, I request your urgent consideration regarding recent information from Washington this weekend, that in our own Second Congressional District that the AFL-CIO would put several workers making door to door calls, introducing literature and asking for letters, telegrams, phone calls to Congressmen and Senators in favor of the King-Anderson Bill which is of course the Social Security aspect to the care of the aged.

PRESIDENT'S ADDRESS

If you have read either or both of the two brochures which we have sent you in many letters, "Medical Aid for the Aged, Let's Help Those Who Need Help" or "Socialized Medicine and You", you would realize what the arguments about these consider. I am afraid it would be embarrassing to ask how many of you have written your congressman or senator regarding this. I will not ask for a show of hands. If you have not, let me remind you that your silence indicates to your congressman and senator that you do not approve of the Kerr-Mills Bill and that you don't care what happens. If you are so indifferent, that you do not care what happens then all I can say is that you should consider what is happening in Britain and in Russia and realize it is now being forced bit by bit upon you. It is not being forced in one major bill; it is bit by bit and you will suffer in the long run, but far more important that what will happen to you, is what will happen to your patients. Because when you become socialized the patient becomes socialized. He is merely a number, he is no longer an individual; just as you are no longer an individual doctor you are an agent of the government and will have only a modicum of control of what is best for the patient. After the modicum control over the patient, the government will soon affirm complete control which I am sure you must realize has happened in

other countries and will happen to us in the very near future unless we get "on the ball".

What is the answer to this? It means that you and your wife and your friends must get "hold of the coat collars", so to speak, of the individual voter in your area regardless of where he is, whether he is in the city, in the town or in the country and present this program with the brochures which we have told you about, and which you have received from the state office in several instances.

Again I repeat to you that it has been quite an honor to serve you as the head of this organization and I have enjoyed thoroughly doing what I have done. In closing I can only hope that I have shocked you into some action so that you may continue the practice of medicine as it has been customary in this United States and which has produced the best medical care in the world for any people, but unless you fight for it all I can say is that this is climatic time and that you can only lose once. Once we have lost then we have lost for good. We have won this battle several times before and we may have to win it several times again, but unless you fight this time and other times it is presented then the free practice of medicine is lost.

Again thanking you, I am, sincerely yours.

PROCEEDINGS

85th Annual Session

Arkansas Medical Society

Robinson Auditorium – Hotel Marion
Little Rock

April 16-19, 1961

Dermatologic Society Meeting

The Arkansas Dermatologic Society met on April 16th at the University of Arkansas Medical Center for its annual clinical session with Dr. Roy Noojin of Birmingham, Alabama, as special guest. A number of interesting clinical cases were presented.

FIRST MEETING HOUSE OF DELEGATES

4:30 p.m., April 16, 1961

Lecture Hall, Robinson Auditorium

Speaker C. Lewis Hyatt called the meeting to order in the Lecture Hall of the Robinson Auditorium and requested Dr. Joseph Norton of Little Rock to give the invocation.

Secretary Shuffield called the roll of delegates. The following delegates and members seated as delegates by action of the House were present:

ASHLEY, E. C. Gresham; BAXTER, Ben N. Saltzman; BOONE, Jean C. Gladden; CHICOT, H. W. Thomas; CLARK, J. W. Kennedy; CRAIGHEAD-POINSETT, M. E. Blanton, Charles G. Swingle, J. H. McCurry; CROSS, K. E. Beaton; DESHA, J. H. Hellums; FRANKLIN, Wm. C. Hensley; GARLAND, Lon Reed, Ralph Patterson, Frank Burton; GRANT, Miles F. Kelly; GREENE-CLAY, A. E. Andrews; HEMPSTEAD, James W. Branch; INDEPENDENCE, Paul Gray; JEFFERSON, Charles Reid, Louis Hundley; LINCOLN, C. W. Dixon; LITTLE RIVER, N. W. Peacock, Jr.; MILLER, J. B. Kittrell, Karlton Kemp; MISSISSIPPI, Eldon Fairley; NEVADA, Charles A. Hesterly; OUACHITA, L. E. Drewery; POPEYELL, Roy Millard; PULASKI, Edwin F. Gray, James L. Smith, Edgar Easley, James Headstream, Guy Farris, Jerome Levy, Gordon Oates, Joseph Norton, Tom Johnston, T. Duel Brown, Joe

Shuffield; RANDOLPH, W. E. Hamil; SEBASTIAN, D. W. Goldstein, Art B. Martin, Robert L. Sherman; UNION, C. E. Tommey, Frank J. Thibault; WASHINGTON, Stanley Applegate; COUNCILORS, Hugh Edwards, J. L. Dedman, George Burton, John Wood, H. King Wade, Jr., Robert Jones, Bill Dave Stewart, Ross Fowler, C. C. Long, L. A. Whittaker, President J. J. Monfort, President-elect Wm. A. Snodgrass, Secretary Elvin Shuffield, Speaker C. Lewis Hyatt, Second Vice President Kenneth R. Duzan, PAST PRESIDENTS, H. King Wade, Sr., W. R. Brooksher, Sam J. Allbright, and O. J. T. Johnston.

Speaker Hyatt called for a report from the Credentials Committee. Dr. Julius Hellums, Chairman of the Credentials Committee, reported that credentials of the delegates present had been examined, found correct, and that a quorum was present.

Upon the motion of J. J. Monfort and James L. Smith, the House adopted as correct the minutes of the 84th Annual Session as published in the June 1960 issue of the Journal of the Arkansas Medical Society.

Upon the motion of Louis Hundley and J. J. Monfort, the House voted to go into Executive Session to hear Mr. Aubrey Gates, Director of the Field Service Division of the American Medical Association, discuss legislative matters.

By general agreement, the Executive Session of the House was recessed for recognition of honor guests as follows:

Mrs. William Mackersie, President of the Woman's Auxiliary to the American Medical Association;

Mrs. Kalford Howard, President of the

PROCEEDINGS

Woman's Auxiliary to the Southern Medical Association;

Mrs. C. C. Long, President of the Woman's Auxiliary to the Arkansas Medical Society;

Mrs. Hershel Wilmoth, President-elect of the Woman's Auxiliary to the Arkansas Medical Society;

Mrs. Paul Gray, Past President of the Woman's Auxiliary to the Arkansas Medical Society.

Mrs. Mackersie and Mrs. Howard spoke briefly bringing greetings from their respective organizations.

Chairman of the Council Joe Verser moved adoption of the report of the Council of the Arkansas Medical Society as published in the March 1961 issue of the Journal of the Arkansas Medical Society. Upon second by Kemp, the House voted adoption of the report. Verser then presented to the House the following supplementary report of the Council covering the meeting of March 26th, 1961:

REPORT OF THE COUNCIL

Joe Verser, Chairman

The Council met on March 26th and transacted business as follows:

- I. Approved Executive Committee action authorizing a new fee schedule for the various government programs and suggesting legislation to enable physicians in Arkansas to incorporate for the practice of medicine.
- II. Directed that uniformed guards be posted at the entrance to the Robinson Auditorium to insure that only persons wearing badges are admitted.
- III. Approved the budget as submitted by the Budget Committee and published in the March issue of the Journal of the Arkansas Medical Society.
- IV. Adopted and approved the annual report of audit.
- V. Approved the report of the Liaison Committee with the Welfare Department recommending that physicians' fees for the Old Age Assistance Program and the Medical Aid for the Aged Program be the same.
- VI. Approved the recommendation of the Committee on Fee Schedules that:
 - A. The Society adopt:
 1. One conversion factor for the Medicare

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY 1961



Seated, left to right: Third Vice President L. E. Drewrey; First Vice President M. E. Blanton; Secretary Elvin Shuffield; Chairman of the Council Joe Verser; President William A. Snodgrass, Jr.; President-elect H. King Wade, Jr.; Treasurer Ben N. Saltzman; Speaker C. Lewis Hyatt; Standing, second row, left to right, Councilor Paul Gray, Councilor Eldon Fairley; Councilor George C. Burton; Vice Speaker of the House J. P. Price; Councilors Thomas E. Townsend, Bill Dave Stewart, Hugh R. Edwards, Ross Fowler, H. W. Thomas; Standing, back row, left to right; Councilor L. A. Whittaker, Jr.; Second Vice President Charles W. Reid, Councilors Stanley Applegate, Karlton Kemp, Past President J. J. Monfort; Councilor John Wood, Past President James M. Kolb, Sr.; Councilor C. C. Long; Councilor Fred B. Stone.

PROCEEDINGS

- Contract and the Veterans Administration Contract;
2. One conversion factor for vocational rehabilitation; and
 3. One conversion factor for all welfare recipients (Kerr-Mills and Welfare).
- B. That the conversion factor for:
1. Medicare and VA be \$5 per unit value for all branches of medicine;
 2. Vocational Rehabilitation — radiology, pathology and medicine use a \$4 conversion factor and surgery have a \$3 factor;
 3. The Kerr-Mills and Welfare Programs have a \$4 factor for surgery and a \$4.50 factor for radiology, pathology, and medicine.
- C. That, depending on a review by the Council, an exception be made to the California Relative Value Schedule in the section on Pathology and that instead a Relative Value Schedule recommended by the American Society of Clinical Pathologists, submitted by Dr. Koenig, be adopted.
- D. The procedure number 9102 have a unit value of 2.0; number 9103 have a unit value of 1.0;
- E. Under radiology, that a unit value of 2.0 be given all of the following procedure numbers: 7030, 7260, 7311, 7475, 7476, 7600, and 7618. Items "B" through "E" above were accepted with the provision that any specialty section can request changes by getting the approval of the fee committee and the Council.
- VII. Approved a suggestion that the Journal of the Arkansas Medical Society be sent free of charge to approved interns and residents in Arkansas and Arkansas graduates holding residencies or internships outside of the State.
- VIII. Approved the following appointments to the Professional Relations Committee:
 Richard M. Logue, Chairman, Eighth Councilor District
 Clyde D. Rodgers, Member, Eighth Councilor District
 Carl Wilson, Member, Tenth Councilor District
- IX. Voted a special commendation for Dr. Henry Hollenberg, retiring chairman of the Eighth Councilor District Professional Relations Committee for his excellent work in connection with committee duties on the Medicare Program.
- X. Voted a commendation for Dr. Art Martin for his service as chairman of the Professional Relations Committee of the Tenth Councilor District.
- XI. Referred to the Arkansas delegates to the American Medical Association a decision on whether or not to support ambulatory clinic treatment for narcotic addiction.
- XII. Approved Arkansas participation in an experiment on the health care of the aged to be carried out under the direction of the State Board of Health.
- XIII. Referred a request for reactivation of the Prairie County Medical Society to the councilor from that district.
- XIV. Heard Mr. Aubrey Gates, Director of the Field Service Division of the American Medical Association, warn of the danger of the passage of the King-Anderson Bill, H.R. 4222.
- XV. Voted to approve a proposal by the Arkansas Heart Association for a nurses workshop for care of the cardiac patient.
- XVI. Approved the appointment of Dr. Joseph Norton as chairman of the Senior Medical Committee, replacing Dr. W. R. Brooksher, resigned, and directed the Executive Secretary to write a letter of thanks to W. R. Brooksher for his excellent work in establishing and conducting the Senior Medical Day. Requested that the letter be published in the Journal of the Arkansas Medical Society.
- XVII. Approved a member of the Industrial Health Committee attending meetings in St. Louis and Hot Springs.
- XVIII. To improve the Society's contacts with its members, the Council voted to increase the previously approved budget in the following categories:
- | | |
|-----------------------------|---------|
| Travel and convention | \$2,000 |
| Stationery and Printing | 500 |
| Office Supplies and Expense | 500 |
| Rent | 600 |
| Postage | 1,000 |
- Upon the motion of Verser and Thomas, the House adopted the supplementary report.
- Speaker Hyatt read the list of published committee reports referred to either Reference Committee Number One (H. W. Thomas, Chairman, L. E. Drewrey, Joseph A. Buchman) or to Reference Committee Number Two (Louis K. Hundley, Chairman, J. W. Kennedy, Bill D. Stewart) and announced open hearings of the committees. Supplementary reports were then called for.
- W. R. Brooksher, Chairman of the Committee on Constitutional Revision, reported that his Committee met on Sunday, April 16th, and wished to reverse its previous recommendation pertaining to the proposed amendment to Article IV, Section 2. The committee recommended approval of the amendment as proposed.
- Hayden H. Donahue, Chairman of the

Sub-Committee on Mental Health, read his report, which had not been published.

In the absence of Chairman Randolph Ellis, Jack Kennedy read a supplementary report from the Sub-Committee on Industrial Health.

Elvin Shuffield reported for his Committee on Medical Legislation. During discussion of the report, Dr. Monfort pointed out that doctors were going to have to spend some time and effort to defeat socialized medicine and that there had been reports that the Labor Unions were going to put two hundred paid workers in one congressional district in Arkansas to go door-to-door to get the people to write their congressmen favoring the King Bill.

Speaker Hyatt announced that Dr. Thomas M. Durham, Chairman of the Professional Relations Committee, was unable to be present and had requested that his committee report be read. Dr. Hyatt requested the Executive Secretary to read the report. All reports were referred to Reference Committees.

The Society attorney, Mr. Eugene Warren, spoke briefly concerning proposed amendments to the Constitution and By-Laws and pointed out that there seem to be several conflicting sections in the present Constitution. He suggested that the Constitution be reviewed and amended for clarification.

The delegate from the E.E.N.T. Section, Dr. James L. Smith, presented a proposed resolution calling for the establishment of an AMA Commission on the Relation of Medicine to Optometry. The resolution was referred to Reference Committee Number Two.

At the request of Dr. L. E. Drewrey, the House heard Mr. Lloyd E. Lenard, C.L.U. and Mr. J. Merle Lemley discuss an investment and pension plan for the Arkansas Medical Society. Speaker Hyatt announced that a vacancy occurred on the Arkansas State Medical Board from the Second Congressional District and indicated the time and place for a meeting of congressional district members for election to fill the vacancy.

Speaker announced that the selection of the nominating committee for election of Society officers would be made. Delegates from the various councilor districts held

meetings on the floor and selected the nominating committee as follows: First District, J. H. McCurry; Second District, O. J. T. Johnston; Third District, Vance J. Crain; Fourth District, Louis K. Hundley; Fifth District, George Burton; Sixth District, John Wood; Seventh District, Lon Reed; Eighth District, Ed Gray; Ninth District, Ross Fowler; Tenth District, A. S. Koenig.

FIRST GENERAL SESSION

Monday, April 17th, 1961, 9:00 a.m.

Lecture Hall, Robinson Auditorium

The meeting was called to order at 9:00 a.m. by Dr. Walter H. O'Neal of Little Rock. The scientific program opened with a showing of the film "Emergency Surgery of the Acutely Injured". Scientific papers were presented as follows: "Acute Injuries of the Hand", Dr. Daniel Riordan of New Orleans; "The Diagnosis of Strabismus", Dr. James E. Miller of St. Louis; "Medical Malpractice — Present Trends", Dr. Carl Wasmuth, Cleveland, Ohio. At 11:30 a.m. invocation was given by Dr. Richard Hardie of the Westover Hills Presbyterian Church in Little Rock and the President's Address was presented by Dr. J. J. Monfort of Batesville (as reported on page one).

SECOND GENERAL SESSION

Monday, April 17th, 1961, 2:0 p.m.

Kenneth R. Duzan, Second Vice President, presided and presented the following scientific speakers:

- "The Place of Radical Neck Dissection in the Treatment of Intra-oral Carcinomas", Dr. O. H. Beahrs, Rochester, Minnesota;
- "Diagnosis and Treatment of Renal Hypertension", Dr. Eugene F. Poutasse, Cleveland, Ohio;
- "Medical Complications of Pregnancy", Dr. Stewart A. Fish, Dallas, Texas;
- "Common Sense in the Diagnostic Use of X-Ray", Dr. J. E. Miller, Dallas, Texas.

MONDAY EVENING, APRIL 17th

A cocktail party and buffet dinner were held at the Marion Hotel on Monday Evening, April 17th, with 285 attending. Dr. John McC. Smith, president-elect of the

PROCEEDINGS

Pulaski County Medical Society, was master of ceremonies. Entertainment was furnished by the Greater Little Rock Chapter of the Society for the Preservation and Encouragement of Barber Shop Quartet Singing in America, Inc., and by a visiting doctor who is a highly-entertaining magician.

FIFTY YEAR CLUB BREAKFAST

The Fifty Year Club of the Arkansas Medical Society met for breakfast at 7:30 a.m. on Tuesday, April 18th, in the Hotel Marion. Dr. H. W. Schmidt of Rochester, Minnesota, was guest speaker. Other guests present were Dr. Alfred Suggs of Ada, Oklahoma, Dr. Snodgrass, Dr. Monfort, and Mr. Hamilton Moses. Dr. D. W. Goldstein of Fort Smith is president of the club and Dr. J. G. Gladden of Harrison is president-elect. Dr. J. H. McCurry of Cash is secretary.

FINAL GENERAL SESSION

Tuesday, April 18th, 1961, 9:30 a.m.

Lecture Hall, Robinson Auditorium

The Final General Session was called to order by President-elect William A. Snodgrass at 9:30 a.m. Following a showing of the film "Just Four Minutes", Dr. H. W. Schmidt of Rochester, Minnesota, spoke on "Regurgitant Esophagitis" and Dr. Margaret H. D. Smith of New Orleans discussed "The Problem of Staphylococcal Infections".

MEMORIAL SERVICE

President J. J. Monfort presided at a Memorial Service honoring members who had passed away during the year. The invocation was given by the Reverend Kenneth Shamblin of the Pulaski Heights Methodist Church in Little Rock. Mrs. T. Duel Brown, Auxiliary Chaplain, read the names of the deceased members of the Auxiliary:

Mrs. S. J. McGraw, El Dorado
Mrs. J. G. Mitchell, El Dorado
Mrs. W. H. Moreland, Tyronza
Mrs. R. E. Rowland, Little Rock
Mrs. J. P. Runyan, Little Rock
Mrs. V. B. Smith, Marked Tree
Mrs. Peter Trinca, El Dorado
Mrs. James H. Fowler, Harrison
Mrs. Wm. R. Porter, Hot Springs

Mrs. C. T. Drennen, Hot Springs
Mrs. Earle Hunt, Clarksville
Mrs. C. E. Kennedy, Smackover
Mrs. J. H. Kennerly, Batesville
Mrs. Bertram Levy, Little Rock
Mrs. C. E. Witt, Little Rock
Mrs. W. K. Smith, Hot Springs
Mrs. A. W. Strauss, Sr., Little Rock

President Monfort read the names of the deceased members of the Society.

Gean S. Atkinson, Blytheville
John W. Brown, Pocahontas
C. A. Campbell, Mena
P. L. Evans, Marshall
R. H. Evans, Chatfield
George B. Fletcher, Hot Springs
Cad A. Henry, State Sanatorium
Homer A. Higgins, Little Rock
I. H. Jewell, Paris



John McCollough Smith was master of ceremonies for the Monday night buffet and party. April 17th, Grand Ballroom, Hotel Marion.

PROCEEDINGS

James W. Leatherman, Hot Springs
Francis A. Lee, Vandervoort
John P. McAlister, Camden
G. F. Mobley, Morrilton
George E. Mullins, Emerson
John F. Rowland, Hot Springs
M. A. Shelton, Wabbaseka
J. R. Sloan, Garner
John F. Smith, Paris
O. V. Smith, Jonesboro
H. O. Walkers, Newport
O. S. Woods, Salem
Homer K. Wright, Hot Springs

The Memorial Address was given by Dr. Joe Reid of Arkadelphia. Mrs. Paul Gray of Batesville sang "The Lord's Prayer" by Malotte. Benediction was pronounced by Reverend Kenneth Shamblin.

SPECIALTY SECTION MEETINGS

Tuesday, April 18th, 1961

There was no general session on Tuesday afternoon, April 18th. Specialty meetings were held as follows:

The Eye, Ear, Nose and Throat Section met in the Court Room of the Hotel Marion, beginning at 9:30 a.m. Speakers were: Dr. M. E. Blanton, Dr. James Miller, Dr. Merrill Grayson, Dr. Jack Bailey, Dr. Houston L. Bell, Dr. H. A. Ted Bailey, and Dr. Ronald Bracken.

The Arkansas Society of Internal Medicine met for luncheon and a business meeting in the Continental Room of the Hotel Marion. Following the luncheon, there was an open scientific session with Dr. H. W. Schmidt, Dr. Robert A. Abernathy and Dr. Kerrison Juniper, Jr., as guest lecturers.

The Section on Pediatrics met for luncheon and a scientific program in the Continental Private Dining Room of the Hotel Marion. Papers were presented by Dr. Margaret H. D. Smith, Dr. W. T. Kniker, Dr. Alice G. Beard, and Dr. W. T. Dungan.

The Section on Urology met in the Esquire Room of the Grady Manning Hotel for a luncheon, business meeting, and scientific session. Dr. Eugene F. Poutasse spoke on "The Technique of Aortography" and a Pyelogram Session was moderated by him.

The Arkansas Academy of General Practice met in the Banquet Hall of the Marion Hotel for a luncheon and scientific session. Dr. Alex J. Steigman was guest speaker.

The Section on Radiology met in the Rendezvous Room of the Hotel Marion. Dr. J. E. Miller dis-



The Hotel Marion provided a beautiful buffet line for the Monday night party. April 17th, Grand Ballroom, Hotel Marion.

PROCEEDINGS

cussed "Recent Advances in Angiology" and a film-reading session was moderated by Dr. Howard Barnhard.

The Little Rock Academy of Surgery met at the Top of the Rock Club in the Tower Building for a luncheon and program. Dr. O. H. Beahrs presented a scientific paper.

The Obstetrics and Gynecology Section met in the West Room of the Marion Hotel for luncheon and scientific program by Dr. Stewart Fish.

The Anesthesiologists met for a scientific session in the East Room of the Marion Hotel at 2:00 p.m. with Dr. Carl Wasmuth as guest speaker.

TUESDAY AFTERNOON

April 18th, 1961

From 2:00 to 4:00 p.m. on Tuesday afternoon, April 18th, members and guests toured the new Research Center of the University of Arkansas Medical Center. Demonstrations were included as a part of the tour.

ANNUAL BANQUET, INSTALLATION AND DANCE

Tuesday Evening, April 18th

7:00 p.m., Ballroom, Hotel Marion

Dr. John William Smith, President of the Pulaski County Society, served as master of ceremonies for the annual banquet and president's installation. A three-

piece combination furnished music during the meal.

Dr. Gordon Oates presented the golf prizes. Dr. H. L. Wineland of Pine Bluff won the silver cup for low handicap; Dr. E. H. Wilkes won low net and low gross went to Wallis Ross.

After being introduced by Dr. Smith, Dr. J. J. Monfort, president, presented a check



Dr. O. H. Beahrs (center) of the Mayo Clinic, Rochester, Minnesota, a speaker on the scientific program, is assisted in his entertaining magical act at the Monday night party in the Grand Ballroom of the Hotel Marion.



The Fifty Year Club Breakfast Tuesday morning, April 18th, attended by several past presidents and guests, was addressed by Mr. Hamilton Moses.

PROCEEDINGS

from the American Medical Education Foundation to Mr. Storm Whaley, Vice President for Health Sciences, University of Arkansas Medical School, in the amount of \$7,852.67.

Several numbers were sung by the "Ac-

cidentalists", a quartet from the Greater Little Rock area.

Dr. J. J. Monfort introduced all past presidents present and administered the oath of office as president to Dr. William A. Snodgrass of Little Rock. Dr. Snod-

PRESIDENT'S BANQUET, TUESDAY, APRIL 18th, GRAND BALLROOM HOTEL MARION



With Pulaski County President John William Smith presiding, the officers of the Arkansas Medical Society and distinguished guests were seated at the head tables.



Incoming President William A. Snodgrass, Jr., is congratulated by President Monfort upon being sworn into office. President's Banquet, Tuesday, April 18th, Grand Ballroom, Hotel Marion.

PROCEEDINGS

grass presented a plaque of appreciation from the Medical Society to Dr. Monfort for his services to the Medical Profession and the people of Arkansas.

The "Accidentals" again entertained with several excellent vocal numbers.

The President's dance began at 9:00 p.m. and continued until 1:00 a.m.

PAST PRESIDENT'S BREAKFAST

The Past Presidents of the Arkansas Medical Society met for breakfast at 7:30 a.m. on Wednesday, April 19th, in the Rendezvous Room of the Hotel Marion.

FINAL MEETING, HOUSE OF DELEGATES

10:00 a.m. Wednesday, April 19th, 1961

Lecture Hall, Robinson Auditorium

Speaker Hyatt called the House of Delegates to order at 10:00 a.m. on Wednesday,

April 19th, in the Lecture Hall of the Robinson Auditorium. He requested Dr. C. R. Ellis of Malvern to give the invocation.

Secretary Shuffield called the roll of delegates. The following delegates and members seated as delegates by action of the House were present:

ASHLEY, E. C. Gresham; BAXTER, Ben N. Saltzman; BENTON, E. C. McCollum; BOONE, Jean C. Gladden; BRADLEY, George F. Wynne; CHICOT, H. W. Thomas; CLARK, J. W. Kennedy; COLUMBIA, Paul Sizemore, CRAIGHEAD-POINSETT, M. E. Blanton, Charles G. Swingle; CROSS, Vance J. Crain; DREW, J. P. Price; FRANKLIN, Wm. C. Hensley; GARLAND, Lon Reed, Ralph Patterson, Euclid Smith; GRANT, Miles F. Kelly; GREENE-CLAY, A. E. Andrews; HOT SPRING, C. Randolph Ellis; INDEPENDENCE, Paul Gray; JEFFERSON, Charles Reid, Louis Hundley, JOHNSON, James M. Kolb, Sr.; LAWRENCE, Wayne B. Glenn; MILLER, Karlton Kemp; MISSISSIPPI, Eldon Fairley; NEVADA, Charles A. Hesterly; OUACHITA, L. E. Drewery; POLK, Calvin Austin; PULASKI, Edwin F. Gray, James L. Smith, Edgar Easley, James Headstream, Guy Farris, Jerome Levy,

PAST PRESIDENT'S BREAKFAST



The Past Presidents' Breakfast was held on Wednesday, April 19th. Front row, left to right: H. Fay H. Jones, W. R. Brooksher, W. H. Mock, O. J. T. Johnston, R. C. Dickinson; Back row, left to right, James M. Kolb, Joe Shuffield, J. J. Monfort, Fount Ricahrdson, and Louis Hundley.

PROCEEDINGS

John Hundley, Gordon Oates, Joe Norton, Tom Johnston, T. D. Brown; SEBASTIAN, Art B. Martin; UNION, C. E. Tommey, Frank J. Thibault; WASHINGTON, Fount Richardson, Stanley Applegate, WOODRUFF, Fred C. Inman; COUNCILORS Hugh R. Edwards, J. L. Dedman, George C. Burton, John Wood, H. King Wade, Jr., Bill D. Stewart, Ross Fowler, C. C. Long, and L. A. Whittaker; PAST PRESIDENTS, O. J. T. Johnston, J. J. Monfort, H. Fay H. Jones, President Wm. A. Snodgrass, Speaker C. Lewis Hyatt, and Vice Speaker J. P. Price.

Eldon Fairley, chairman of the Credentials Committee, reported that a quorum was present.

Louis K. Hundley, chairman of the Nominating Committee, presented the following report:

The Nominating Committee submits the following proposes slate of officers:

FOR PRESIDENT-ELECT:

H. King Wade, Jr., Hot Springs
W. R. Brooksher, Fort Smith

FIRST VICE PRESIDENT:

M. E. Blanton, Jonesboro

SECOND VICE PRESIDENT:

Charles W. Reid, Pine Bluff

THIRD VICE PRESIDENT:

L. E. Drewrey, Camden

TREASURER:

Ben N. Saltzman, Mountain Home

SECRETARY:

H. Elvin Shuffield, Little Rock

SPEAKER OF THE HOUSE OF DELEGATES:

C. Lewis Hyatt, Monticello

VICE SPEAKER OF THE HOUSE OF DELEGATES:

J. P. Price, Jr., Monticello

COUNCILORS—

First District: Eldon Fairley, Osceola
Second District: Paul Gray, Batesville
Third District: Fred B. Stone, Stuttgart
Fourth District: T. E. Townsend, Pine Bluff
Fifth District: George C. Burton, El Dorado
Sixth District: Karlton Kemp, Texarkana
Seventh District: J. W. Kennedy, Arkadelphia
Eighth District: Bill Dave Stewart, Little Rock
Ninth District: Stanley Applegate, Springdale
Tenth District: C. C. Long, Ozark

DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION:

Fount Richardson, Fayetteville

ALTERNATE DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION:

J. W. Kennedy, Arkadelphia

COUNCILOR FROM SEVENTH DISTRICT:

(vacancy created by nomination of Dr. Wade as president-elect)

Martin Eisele, Hot Springs

Upon the motion of Hundley and Ellis, the report was adopted as read. Speaker Hyatt announced that Dr. W. R. Brooksher had requested his name be withdrawn from the slate as a nominee for president-elect. The Speaker then called for nominations from the floor. Upon motion of Monfort and Kolb, all officers were elected by acclamation.

Speaker Hyatt then requested that the new president-elect, Dr. H. King Wade, Jr., be escorted to the platform. Dr. Wade briefly thanked the House of Delegates for selecting him for the office.

Speaker Hyatt called for reports from the reference committees. The reports were presented as follows:

REPORT OF REFERENCE COMMITTEE NUMBER ONE

H. W. Thomas, Chairman

Reference Committee Number One met in the Rendezvous Room of Hotel Marion, Monday, April 17th, at 1 p.m. and took the following action:

1. Recommended approval of the Report of the Cancer Control Committee as published.
2. Recommended approval of the Report of the Committee on Public Health as published.



President J. J. Monfort presents A.M.E.F. check for \$7,852.67 to Mr. Storm Whaley, Vice President for Health Sciences, University of Arkansas Medical Center. President's Banquet, April 18th, Grand Ballroom, Hotel Marion.

PROCEEDINGS

3. Recommended approval of the Committee on Rural Health as published.
4. Recommended approval of the Report of the Sub-Committee on Industrial Health as submitted and as supplemented in the House of Delegates on April 16th.
5. Recommended approval of the Report of the Sub-Committee on Tuberculosis as published.
6. Recommended approval of the Report of the Sub-Committee on Liaison with the State Board of Health as published.
7. Recommended approval of the Polio Advisory Sub-Committee as published.
8. Recommended approval of the Report of the Committee on Medical Education as published.
9. Recommended approval of the Report of the Sub-Committee on Post-Graduate Education as published.
10. The Report of the Sub-Committee on A.M.E.F. was considered especially as it pertained to the recommendation that the Sub-Committee on A.M.E.F. be composed of the physician members of the board of M.E.F.A. It is recommended that this be adopted.
11. Recommended approval of the Committee on Hospitals as published.
12. Recommended approval of the Report of the Sub-Committee on Liaison with Blue Cross-Blue Shield as published.
13. Recommended approval of the Report of the Committee on Public Relations as published.
14. Recommended approval of the Report of the Sub-Committee on State Health and Medical Resources for Civil Defense and commends this committee and its chairman for its excellent appraisal of its problems.
15. Recommended approval of the Report of the Sub-Committee on V.A. Affairs.
16. Recommended approval of the Report of the Committee on Insurance. The reference committee feels that Dr. L. E. Drewrey deserves special commendation in appreciation of his outstanding performance on this committee during the past three years.
17. Recommended approval of the Report of the State Medical Board as published.
18. Recommended approval of the Report of the State Board of Health as published.
19. The Report of the Sub-Committee on Mental Health as read before the House of Delegates on April 16, 1961 was considered in detail. This committee should be commended for the study devoted to the problems of Mental Health in Arkansas. Inasmuch as the recommendations of this committee may involve several other agencies including The Children's Colony, State Welfare Department, The Vocational Rehabilitation Program, Correctional Institutions, The State Health Department, and possibly other related agencies, it is recommended that final action on this report be deferred until such time as consultation with these affected agencies can be obtained.

Upon motion of Thomas and Kolb, the House adopted the Report of Reference Committee Number One.

REPORT OF REFERENCE COMMITTEE NUMBER TWO

Louis K. Hundley, Chairman

Reference Committee Number Two met April 17th in the Hotel Marion and considered the following committee reports:

1. Report of the Committee on Arrangements for the Annual Session. Approve the report and commend the committee on the excellent program. Suggest that the Executive Secretary of the Society be instructed to call to the attention of all specialty sections chairmen the paragraph relating to selection of speakers at the Annual Session for the next meeting of the Society.
2. Report of the Constitutional Revisions Committee. Approve the report of this committee as amended and recommend no actions be taken on the amendment to Section 2, Article IV, as proposed.
3. Report of the Budget Committee. Approve as amended.
4. Report of the Committee on the Senior Medical Day. Approve the report. Its retiring chairman, Dr. W. R. Brooksher, is commended for the excellent way in which this program has been carried out.
5. Report of the Traffic Safety Committee. Is approved.
6. Report of the Special Committee on the Medical Center. Is approved and it is recommended that this committee be disbanded.
7. Report of the Sub-Committee on Physical Fitness and School Health. This report is approved and it is recommended that a member of the committee be sent to the A.M.A. biennial conference of schools and physicians at the expense of the Society.
8. Report of the Committee on Liaison with the State Welfare Department is approved and the committee is commended for the excellent work.
9. Report of the Arkansas State Advisory Committee to the Selective Service System is approved.
10. Reports of the various councilor district professional relations committees are approved and the members are commended for their excellent work.
11. Report of the Council as amended is approved but attention of the Council is directed to Section 5, Chapter VII of the By-Laws of the Arkansas Medical Society, which calls for a report to the House of Delegates annually on the cost of publications and on the amount of property belonging to the Society and under its control. It is apparent that this has not been complied with and it is suggested that

PROCEEDINGS

the necessary figures, in mimeographed form, be supplied to the House of Delegates at its first meeting of the next Annual Session, in order to comply with the above-mentioned section.

12. The Executive Secretary's Report is approved and the Executive Secretary and his staff are commended for the excellent way in which they have carried out their duties during the past year.
13. Report of the Legislative Committee is approved and the attention of all members is directed to their plea for cooperation of individual members of the Society in order that a united stand may be presented on all matters relating to legislation.
14. The resolution presented by the Section on Ophthalmology is approved and it is recommended that it be passed.

Upon the motion of Hundley and Monfort, the House adopted the report of Reference Committee Number Two.

Hundley urged that members of the House of Delegates and other members of the Society participate fully and freely in the program of reference committee hearings for discussion of reports.

Chairman Joe Verser read the following Supplemental Report of the Council:

REPORT OF THE COUNCIL

Joe Verser, Chairman

The Council met on Sunday, April 16th, and transacted the following business:

1. Received requests by the Arkansas Society of Anesthesiologists for a \$5 unit value on all government medical care programs and voted to suggest to the anesthesiologists that a review of the relative value schedule be made with a view to changing the unit value of the procedures rather than altering conversion factors previously approved.
2. Approved the modified Pathology Relative Value Schedule submitted by the Arkansas Society of Pathologists.
3. Renominated Dr. T. L. Adair and Dr. J. P. Williams to succeed themselves on the Arkansas State Arbitration Commission.
4. Nominated Dr. Frank Kumpuris and Dr. Ben N. Saltsman for the vacancy occurring on the State Cancer Commission.
5. Nominated Dr. A. S. Koenig to succeed himself on the Board of Trustees of Blue Cross-Blue Shield.
6. Approved life and affiliate dues-exempt status for the following:

RESIDENCY TRAINING

L. K. Williams	James S. Priddy
Chester W. Peoples	Edith Irby Jones
J. W. Hollis	J. Harry Hayes, Jr.
Charles Winn	R. L. Daniels

RETIREMENT

George B. Alcott	Hamilton K. Carrington
Paul Jeffrey	Arthur V. Adams
Howell W. Brewer	B. C. Middleton
Joseph DeLaney	W. A. Fowler
Allan A. Gilbert	Frank N. Gordon
Jesse Stevenson	H. C. Dorsey
H. A. Murphy	J. D. Riley
Edward Kultgen	John P. Ferguson
W. H. Bruce	Shelby Atkinson
W. M. McRae	H. N. Miller

MILITARY SERVICE

James R. Dickson	Victor Ferrari
Morriss Henry	Wood C. Hiatt

DISABILITY

Calvin A. Churchill	Virgil L. Payne
Herman L. Brown	S. T. W. Cull
Bryce Cummins	James D. Hayes
Ralph A. Law	

LIFE MEMBERSHIP

George L. Hardgrave	Harold Phipps
L. D. Reagan	

7. Referred a request from the Arkansas Alumni Association for a donation of funds for student loans to the Medical Education Committee for study and recommendation.
8. Appointed Dr. John Walter Jones to the Professional Relations Committee for the Sixth Councilor District, succeeding Dr. R. R. Kirkpatrick, resigned.
9. Received an expression of appreciation from the Arkansas State Medical Assistants Society for Medical Society help in establishing a formal program of education for the assistants.
10. Appointed Dr. Robert Jones, Dr. L. A. Whitaker, and Dr. Lewis Hyatt a committee on resolutions.
11. Voted to recommend to the House of Delegates that the Executive Committee be instructed to work with the Blue Cross-Blue Shield Board to investigate fiscal affairs and operations of the Arkansas Blue Cross-Blue Shield and report back to the Council within six months.
12. Approved a request by Dr. Drewrey that a representative of an investment plan be allowed to speak to the House of Delegates.
13. Heard a report by Dr. Monfort and Dr. Elvin Shuffield on the status of the Kerr-Mills Medical-Care-for-the-Aged Program in Arkansas.

The Council met on Monday, April 17th, and:

1. Heard Dr. R. B. Robbins discuss tentative A.M.A. plans to form an American Medical Political Action Committee;
2. Heard Dr. Easley report that the Ouachita County Medical Society had agreed to participate in a pilot survey on the number of older people needing nursing care;
3. Heard attorney, Mr. Eugene Warren, explain

PROCEEDINGS

the operation of the new Medical Corporation Act.

The Council met on Tuesday, April 18th, and:

1. Voted to donate \$50 to the Arkansas Council on Children and Youth;
2. Voted to present the annual audit report to the House of Delegates in complete detail by projector, with copies available for individual members requesting them.

The Council met on Wednesday, April 19th, and:

1. Voted to require county societies to submit copies of their constitutions and by-laws to the State Society Headquarters within six months.
2. Directed the Executive Secretary to accept for state membership anyone reported to the State Society Headquarters Office as being a bona-fide member of the county medical society as of December 31, 1960.

Upon the motion of Verser and Kolb, the House adopted the Supplementary Report of the Council.

The Society attorney, Mr. Eugene Warren, spoke briefly explaining the Council's action.

Upon motion of Thomas and Fairley, the Executive Secretary was directed to work with Mr. Warren in forming a model constitution and by-laws to be distributed to the county medical societies.

Verser then stated that the report of the annual audit of the Society's records would be presented. Upon motion of Hundley and Fowler, the House went into Executive Session and Speaker Hyatt requested all guests to leave the room.

During the discussion regarding the presentation of the audit report, the House of Delegates expressed its confidence in the Council's handling of the Society's finances. It was pointed out that the Council was required to submit only a summarization of the Society's activities to the House of Delegates.

Upon the motion of Oates and Verser, the House voted:

1. To accept the 1960 Audit Report as approved by the Council;
2. To designate the Council as the authority to summarize the audit report to be presented to the House of Delegates;
3. To request that at the next annual session the House be furnished with mimeographed copies of the summary of the Society's financial report;

4. That, in the future, mimeographed copies of the complete audit report, consecutively numbered, be made available to members of the House who wanted them. The members are to sign for the copies received and may keep them as long as desired.

Upon motion of Saltzman and Kolb, the House voted to end the Executive Session and invited guests to return to the meeting room.

Speaker Hyatt called reports from committees. L. A. Whittaker, chairman of the Resolutions Committee, presented resolutions expressing thanks to the officials of the City of Little Rock, the News Media, the Committee on Arrangements, the Marion Hotel, The Woman's Auxiliary, the Ministerial Alliance, The Robinson Auditorium, the Commercial and Scientific Exhibitors, Arkansas Heart Association, Arkansas Tuberculosis Association, the University of Arkansas Medical Center, and the Chamber of Commerce. Upon the motion of Whittaker and Applegate, the resolutions were unanimously adopted as presented.

Speaker Hyatt called for new business. Ouachita County Delegates, L. E. Drewrey, requested approval to present a proposed constitutional amendment establishing a committee on medical economics. Kemp moved that the House allow Dr. Drewrey to present the proposal, second by Burton. Motion rejected. Dr. Drewrey was instructed to present the proposal to the Constitutional Revisions Committee.

Dr. Hyatt reported that Dr. Hugh R. Edwards had been selected by members from the Second Congressional District to succeed himself as a member of the State Medical Board. Upon the motion of Verser and Thomas, the nomination was approved by the House.

Speaker Hyatt requested motion and discussion regarding meeting place for the 1963 Annual Session. Bill Dave Stewart, speaking for the Pulaski County Delegation, invited the Society to Little Rock for the 1963 meeting. Upon motion of Verser and Monfort, the House unanimously accepted the invitation.

Dr. Hyatt called the attention of the House of Delegates to the diligent and effective work of the Society Secretary and Legislative Committee Chairman, Dr. El-

vin Shuffield, and the Society's legal counsel, Mr. Eugene Warren. He also stated that the efficient work of the Executive Secretary, Mr. Schaefer, and his assistant, Miss Richmond, should be recognized.

The House adjourned at 12:00 noon.

**REGISTRATION
85th ANNUAL SESSION
ARKANSAS MEDICAL SOCIETY**

Physicians	439
Auxiliary members	68
Medical Students	77
Medical and X-ray technicians	42
Medical Assistants	22
Commercial Exhibitors	131
Scientific Exhibitors	32
News media	6
Other guests	63
<hr/>	
Total	880

**ANNUAL REPORT OF THE
SUB-COMMITTEE ON
MENTAL HEALTH**

Hayden H. Donahue, Chairman

During the past fiscal year, your Mental Health Sub-Committee has met officially one time. However, the members of this Sub-Committee have met informally and by telephone from time to time during this period.

Your Sub-Committee, following the example of the mental health chairmen of state medical societies who met in Chicago in January, 1961, has given considerable thought to the problems presented by the ever-increasing number of mentally ill in this state and the nation. It has become obvious to all committee members that it would be impossible to care for and treat all of the mental illness in Arkansas in the State Hospital and the few psychiatric wards now available in general hospital units.

From studies made in other states, it has become apparent that psychiatric wards will become available in community general hospitals only when psychiatrists become available to serve these areas.

At the present time, residency training in psychiatry is going forward at the state hospital, the University of Arkansas School of Medicine, and the Veterans Ad-

ministration Hospital in North Little Rock. It is the purpose of these residencies to not only train personnel to meet the needs of these particular institutions but also furnish psychiatrists into the private practice of the specialty. Obviously, even though we are able to train an adequate number of psychiatrists and these psychiatrists enter into practice in the smaller communities of this state, there will still be a need for some type of program to care for those who are unable to avail themselves of the services of such private practicing specialists.

If Arkansas is to meet this latter need, it must not only further develop its present state hospital facilities, but expand psychiatric diagnosis, treatment and rehabilitation out into the state as a whole.

If Arkansas is to keep abreast of its sister states, it must establish day-hospitals, clinics, and such other facilities as may be necessary to meet the mental health needs of its people.

If Arkansas is to develop and maintain an efficient and effective mental health program, which will adequately meet the diagnostic, treatment and rehabilitation needs of its people, at a price that it can afford: it must consider the establishment of a single department of mental health.

In view of the foregoing, it is the recommendation of this committee that the Arkansas Medical Society go on record as recommending:

1. The establishment of a State Department of Mental Health.
2. That the head of any such department be a properly qualified physician who has received adequate training in psychiatry and psychiatric administration.
3. That because of the size and scope of the mental health problem as it relates to the practice of medicine, that the present sub-committee be given full committee status.
4. That the Mental Health Committee as presently constituted, be authorized to draw up the basic plans for the creation and operation of a Department of Mental Health and that these plans be submitted to the Council of the Society no later than its annual meeting in 1962.
5. That if these plans meet with the ap-

proval of the Council of the Arkansas Medical Society, that they be submitted as an official recommendation to the Arkansas State Legislature.

6. That the Mental Health Committee be given authority to call in such advisors and consultant as they deem necessary to insure the proper development of a modern and effective mental health plan.

The foregoing recommendations comply with the general tenor of the discussions that were heard on this subject at the Seventh Annual Conference of Mental Health Representatives of State Medical Associations.

SUPPLEMENTARY REPORT OF THE SUB-COMMITTEE ON INDUSTRIAL HEALTH

C. R. Ellis, Chairman

Your Committee met in Little Rock, Arkansas, on March 26, 1961, extending an invitation to the new Chairman and newly appointed members. We recognize that, although our state is not as industrialized as some others, there are problems in this field demanding our consideration. We recommended to the Council and received their approval to represent our society at two meetings this spring:

- (1) A Regional Meeting of the President's Committee on Employment of the Physically Handicapped in Hot Springs, Arkansas, on April 13 and 14, 1961, and
- (2) A Regional Meeting of the A.M.A. Council on Occupational Health in St. Louis, Missouri, on May 20, 1961.

REPORT OF THE PROFESSIONAL RELATIONS COMMITTEE

Thomas M. Durham, Chairman

The activities of each Councilor District of the Professional Relations Committee has been published in the March, 1961 Journal of the Arkansas Medical Society, pages 431-432.

There has been no problem requiring action by the committee as a whole during this year.

The work of the committee in each

Councilor District has been satisfactory in so far as can be determined and no change in the program or in the rules governing this committee are suggested at this time.

REPORT OF THE COMMITTEE ON MEDICAL LEGISLATION

H. Elvin Shuffield, Chairman

In spite of 1960 being a so called "off year", your legislative committee was extremely busy, meeting with the Legislative Council and the Legislative Budget Committee. The press releases concerning these meetings dealt in personalities, and unfortunately did not cover some of the highly technical and informative material pertaining to the Medical Center. Nevertheless, following these hearings the Medical Center has been able to work out some of its problems with the Welfare Department, and thanks to Vice President Storm Whaley, I believe our medical center is in the best condition it has been in for a number of years.

However, it must be recognized that this institution is still in great need of additional financing in order that the hospital portion can open up more beds to give the students teaching material.

The student per bed ratio is extremely low.

In addition to these meetings, your committee met with the Welfare Department on several occasions, and also had representation at a meeting concerning the Vocational Rehabilitation Center at Hot Springs, Arkansas.

Then came the legislative session in 1961, and gentlemen I have never seen anything quite like this session. As you all know, the teachers retirement and truck tonnage bills took up the biggest portion of four weeks, and this created one of the worst log-jams that has existed for a number of years. Unfortunately, due to this log-jamming, we were unsuccessful in getting House Bill 483, a drug registration bill, called up for a vote. Also, for some reason, the members of our profession, did not act on the request that we sent you, asking you to have your representatives diligently support this bill. For the first time, I had a number of representatives to

ask what had happened to the doctors in their respective counties, and how did they feel about this bill, as the representative had not heard from any doctor in his county. Also, it will be recalled that this bill was discussed at length by Attorney Gene Warren, at the special meeting of the House of Delegates in December of 1960, and it was with the approval of this House of Delegates that we proceeded to try to bring this bill into law. Much to our disappointment, in spite of this information to the doctors, the doctors in one county came out against this bill.

Gentlemen, please let me request that in the event you do not understand any letters or requests concerning legislation that you receive, please contact the officers of this society, or your legislative committee, immediately so that we will all be working together, and not against each other. It is only through the utmost cooperation, and all out effort, are we able to get bills through the legislature.

We learned a lot during the course of the time that this bill was pending in the House, and we certainly must be on the right track, because we have never seen so many out-of-state proprietary drug houses come in to fight this bill. In order to keep the record clear, please remember that this bill will not affect the individual druggist, or require him to register any products, but it would require the manufacturer to register the product. Also, the individual Raleigh salesman, and Watkins product salesman, would not have to register drugs, but their manufacturer would have to. These people mis-led a number of the legislators into believing that this bill would have discriminated against them individually, but I assure you it would not have caused them any trouble provided their manufacturer produced good drugs and then registered these drugs with the State Health Officer.

This drug market needs to be cleaned up. Unfortunately, our people have been spending millions of dollars on products that have very little if any value, and I think it is only fair that our profession insist that a manufacturer give a person his money's worth when he buys a drug over the counter.

Early in the session, House Bill 69 by

the late Rep. Clay Brazil of Morrilton, would have required any hospital, physician or dentist to furnish a certified copy of the medical or dental record on demand of the patient, and as you know, this bill would have caused considerable unnecessary work in the preparation of records. Also, there are instances where this material should not be made public, especially when confidential information would not have any relationship whatsoever to the litigation taking place. This bill did not make any provision for exempting that type of information. Innocent people would have been hurt unnecessarily had this bill passed, but fortunately after the bill was discussed thoroughly with the late Representative Brazil, he graciously withdrew the bill from consideration on February 3, 1961. Special thanks to the doctors of Conway County.

It was at one of these discussions that Mr. Brazil requested that I inform you gentlemen that when a patient presents in writing his authorization the doctor is morally and legally responsible to furnish a report of the patient's condition. He also requested that I ask you gentlemen who work in the hospitals, to discuss this problem with your record room personnel, as there have been a number of instances reported where an attorney could not get a medical report, even with the authorization of the patient, without resorting to a court order, and most attorneys do not like to embarrass the doctor and the hospital with such procedure.

In the event that some case is particularly difficult, or there is information which you do not think should be made part of a public record, please contact the attorney and discuss the case with him, and then he will be in a position to help you evaluate, and present, a report covering only the needed facts and leave out confidential, embarrassing information that would have no relationship to the litigation being discussed.

House Bill 325, introduced by Representative J. H. Cockrill of Pulaski County, is the so-called Medical Corporation Act, and this must not be confused with corporate practice of medicine. This Bill was modeled after the A.M.A. approved Bill, to permit the doctors to form corporations,

and there is some hope that this Bill may lead to encouraging young doctors to set up group practice, in areas where there are not sufficient medical facilities at this time. This bill would permit them some tax breaks in the setting up of these corporations.

For you gentlemen who are practicing in group practice, I suggest that you consult your attorney or accountant, in order to obtain maximum benefits from this law, as it is highly technical, and it will take an experienced person to give you all the benefits of this law.

This bill passed the House without a dissenting vote. There was only one vote against it in the Senate. The governor signed the bill and it is now Act No. 192.

House Bill No. 364, known as the Massage Therapy Act, was also introduced in the early stage of the legislature. This Act, in its original form, would have been in great conflict with the Medical Practice Act, and also there were certain phases of therapy in this Act that were the actual practice of medicine. The author of the bill was very sympathetic to our discussions with him, and he very cooperatively modified this Act to where there would not be any conflict. This Act passed the House of Representatives, but was defeated in the closing days of the Senate.

House Bill 290 provided that any person has the right to direct the manner in which eyes, or parts thereof, shall be disposed of after death. The Act forbids remuneration, and requires that the donation be for the purpose of advancing medical science, or replacing diseased eyes, and others. Provision is made for a written instrument by which the donor may designate the donee who may in turn be an individual or hospital maintained for the preservation of human eyes.

There are other great legal details spelled out in the bill, adequately protecting the physician and the hospital, whether the donor executes a written agreement prior to his death. This bill passed both Houses without any difficulty, and was signed into law by Governor Faubus, and is now Act 90.

We cooperated with the Health Department in helping to pass four of five so-called narcotic bills, and actually all these

bills do is to tighten up loop-holes in existing laws.

House Bill 403. This Bill amends Section 1 of Act 184 of 1951, to prohibit the sale of Barbituric Acid or derivatives and compounds thereof, or stimulating amines or compounds thereof except if intended for nasal or other external use and except by manufacturers or chemical houses to wholesale drug houses to hospitals or retail pharmacies and by retail pharmacies on written and signed prescription of a licensed physician, dentist or veterinarian. The Bill also requires the dispensing pharmacy to keep on file for at least two years prescriptions for drugs specified in 1951 Act, and to require a separate written or verbal prescription for each sale of newly specified drugs. Under the 1951 Act the drugs covered by this Bill could be prescribed by a person holding a license issued by one of the Medical Boards defined by Act 148 of 1935, or any person legally qualified to practice dentistry or veterinary medicine. House Bill 403 was passed by both Houses and signed into law.

House Bill 404—This bill is amendatory to Section 82-1014 of the Arkansas statutes dealing with the disposal of narcotic drugs, the lawful possession of which is not established or the title to which cannot be ascertained by enlarging the scope of the existing law to provide for disposal of narcotic drugs discarded by the owner or other person entitled to possession or custody thereof by delivering the same to the State Health Officer whereupon the Health Officer shall give a receipt therefor and is empowered to destroy such drugs provided he shall keep for three years subsequent a record of the name and address of the person delivering the drugs, a description thereof, date and place of delivery, and the date of destruction. Passed and signed into law.

House Bill 405—This bill amends Section 82-1005 (3) of Arkansas statutes which requires a written order for narcotic drugs in duplicate with one copy to be retained by each party to the transaction. House Bill 405 as now amended provides that the sale of narcotic drugs by a manufacturer or wholesaler shall be only on official written orders in quadruplicate and a copy

thereof sent to the State Health Officer not later than the 10th of the month following the month in which said order was made by the purchaser. Passed and signed into law.

House Bill 406—This bill amends Section 82-1001 (12) of the Arkansas Statutes by including in the definition of "Opium", paregoric and provides that preparations containing paregoric may be exempted from provisions of the Uniform Narcotic Drug Act by regulation of the State Health Officer.

This bill was withdrawn by the author because it would have denied an individual the right of purchasing paregoric, and it was the general consensus of opinion off the record that the rural people should be entitled to purchase paregoric for their personal needs. The members of the House realized that there is a problem in the purchase of paregoric in the urban areas, but they could not see that the problem was severe enough to deny the individual in the rural areas, the purchase of paregoric.

House Bill 407—This bill amends Section 82-1020 of the Arkansas Statutes wherein penalties are provided for the violation of the Uniform Narcotic Drug Act by providing that the imprisonment provided therein shall be in the Arkansas State Penitentiary. Passed and signed into law.

House Bill 408—This bill deals with the safe-keeping of narcotics by pharmacists and provides that a pharmacist authorized to possess narcotic drugs as defined in the Uniform Narcotic Drug Act must keep them in a safe or other receptacle equipped with a lock sufficient to secure the drugs against theft. Violations of the proposed bill would be punishable by heavy fine up to \$2,000.00 and imprisonment ranging from 5 to 20 years. Passed and signed into law.

House Bill 372—This bill would establish a division of hospitals and nursing homes in the State Board of Health which is directed to inventory the existing and needed hospital and medical facilities; develop and administer plans for construction of public and other non-profit hospitals and medical facilities; and to inspect regularly and license hospitals, nursing homes and institutions. Passed.

House Bill 185—a companion bill to Senate 79—would authorize any municipality or county to own, acquire, build, operate, lease or otherwise deal in or dispose of land, buildings or facilities that can be used for nursing homes within or near the municipality or within the county. The bill would authorize the use of any available revenues to accomplish the purpose and would also permit the issuance of revenue bonds for financing. After passing the House of Representatives on January 26, the bill was amended in the Senate expanding the authority therein granted to include hospitals and rest homes and to further authorize the use of surplus revenues from municipal or county owned utilities for the purpose of paying principal and interest payments on any bonds issued thereunder. Passed.

Senate Bill 311 and House Bill 444 are companion bills amendatory to Section 82-612 of the Arkansas Statutes dealing with recalcitrant tuberculosis persons. The bills enlarge the present authority of the Health Officer, who under the terms of the Bills would be authorized to cause such person to be apprehended and detained for necessary tests and examination, including an approved chest x-ray, sputum examination and other approved laboratory tests to ascertain the existence of tuberculosis. As is provided in the present law, if active tuberculosis is found to exist, it is the Health Officer's duty to determine whether the environmental conditions of the person, or the conduct of the person, is suitable for proper isolation or contagious control of the case by any type of legal quarantine.

To you faithful members of this society, I would like to express my extreme appreciation for your cooperation and efforts in fighting these legislative battles. Your legislative committee cannot be any more efficient than you are. It takes the combined efforts of all of us, and it is up to us to convince these other members who are not present that we have to work together, because if we do not, then it is only a matter of time when the politician is going to control the practice of medicine.

This brings us to our national problems. As you know, in the last legislature, the Kerr-Mills Bill was passed, but the mechanics of operation have not had suffi-

cient time to set the wheels in motion. The recent state legislature passed monies for matching fund purposes, but according to the comptroller's information of last week, there is not going to be sufficient money for this state to get maximum matching funds. The overall picture looks as if this program is going to amount to only about 60% of what was originally anticipated. The portion ear-marked for doctor's services, is going to be considerably less. In the original talks, discussions and appropriations, it was expected that about two million of state monies would be matched by four million of federal money, to give approximately \$6,000,000.00 for this phase of treatment, but according to the comptroller only a total of about \$1,800,000.00 will be available. It is up to this body to study this problem diligently before we make any moves. As you know, the Kennedy administration is advocating House Resolution 4222, known as the King-Anderson Bill, which provides for the medical care of the aged under the Social Security program. These advocates have stated all along that the Kerr-Mills Bill is not workable.

There has been considerable propaganda released in the last thirty days concerning the King-Anderson Bill. For example, they are now saying that under this bill the individual will have a free choice of physicians. We must not be lulled into a false sense of security. Even if these people should pass this bill, with a free choice of physician, it is only a question of time to where the bill would be amended and physical control of medicine started.

Also, let us not forget the complications of the paper work, and the government confusing interpretations of bruised regulations concerning Medicare. You gentlemen, who have handled these cases, realize that the paper work hardly justifies the treatment of these patients.

RESOLUTION — RE: Commission on the Relation of Medicine to Optometry.

Whereas, in 1959 there was introduced in the House of Delegates Resolution No. 31 calling for the establishment of a Commission to Study the Relation of Medicine to Optometry, and to report to the House of Delegates; and

Whereas, the House of Delegates caused to be established a Subcommittee to Study the Relation of Medicine to Optometry, under the then Joint Committee to Study Paramedical Areas in Relation to Medicine; and

Whereas, the original Joint Committee to Study Paramedical Areas in Relation to Medicine has been succeeded by the Committee on Relationships of Medicine with Allied Health Professions and Services; and

Whereas, optometrists are not ancillary to medicine, but are independent licensed practitioners, and therefore do not constitute an allied health profession; and

Whereas, there exists confusion in the public mind as to the distinction between medical care for patients with ocular complaints and optometric services; and

Whereas, the lack of understanding in this area is a threat to the welfare of the patient; therefore be it

Resolved, that the House of Delegates establish a Commission on the Relation of Medicine to Optometry, to be appointed by the Speaker of the House; at least half the members of which Commission shall be physicians practicing in the ophthalmological branch of medicine; and be it further

Resolved, that it shall be the specific function of this Commission to conduct a broad study, from the standpoint of the public interest, of the problems involved in the present relation of medicine to optometry, and to explore all possible and desirable solutions to these problems; and be it further

Resolved, that the Board of Trustees be requested to provide adequate personnel and funds for the proper performance of the duty assigned to this Commission; and be it further

Resolved, that this Commission shall report to the House of Delegates not later than June 1962.

RESOLUTIONS

RE: Appreciation

A. Officials of the City of Little Rock



Unless your practice is limited to bacteriology . . . or your patients are all in the upper income brackets . . . you have doubtless received complaints about the cost of the medication you prescribe.

what your patient

gives...and gets

Some of these complaints can probably be dismissed lightly as coming from cranks, who would complain about your fee for a midnight house call to save the life of a dying child. Others, however, are made seriously by thoughtful patients and deserve an answer in kind. You know what the patient gets from his pharmacist because you have prescribed it. Do you also know that the average cost of a prescription is about \$3.00? Only about one in 100 costs \$10.00 or more, and 3 out of 5 of the prescriptions are under \$3.00. These figures are based on retail prices. They include the manufacturer's research, development, and manufacturing costs and all distribution costs of the wholesale and the retail druggist. Only you and your patients can judge whether today's drugs at these prices represent a fair *quid pro quo*, an equitable balance between what is given and what is received.

This message is brought to you by 138 producers of prescription drugs as a service to the medical profession and in the same spirit, it is carried by this publication. For additional information, please write Pharmaceutical Manufacturers Association, 1411 K Street, N.W., Washington 5, D.C.

PROCEEDINGS

WHEREAS, the 85th Annual Session of the Arkansas Medical Society just completed in Little Rock has been an outstanding success,

WHEREAS, the officials of the City of Little Rock have added much to the success of this meeting,

BE IT RESOLVED, that the House of Delegates express its thanks for the Medical Society to the City Manager.

B. News Media

WHEREAS, the radio and TV stations and the local newspapers have made available to the Medical Society extended coverage of its meeting,

BE IT RESOLVED, that the House of Delegates express its thanks for the Medical Society to the News Media mentioned above.

C. Local Committee on Arrangements

WHEREAS, the 85th Annual Session of the Arkansas Medical Society just completed in Little Rock has been a most successful meeting,

WHEREAS, the Host County Medical Society has gone out of its way to be most courteous to all of us in attendance at this meeting,

BE IT RESOLVED, that the House of Delegates express its thanks for the Medical Society to the Committee on Arrangements of the Pulaski County Medical Society.

D. Woman's Auxiliary to the Pulaski County Medical Society

WHEREAS, the 85th Annual Session of the Arkansas Medical Society just completed in Little Rock has been an outstanding success,

WHEREAS, your group has contributed immeasurably to its outcome,

BE IT RESOLVED, that the House of Delegates express its thanks to the Women's Auxiliary of the Pulaski County Medical Society.

E. Marion Hotel

WHEREAS, the management has been most successful in providing accommodations for the numerous activities of the meeting,

BE IT RESOLVED, that the House of Delegates express its thanks for the Medical Society to the Marion Hotel.

F. Ministerial Alliance

WHEREAS, the Ministerial Alliance of Little Rock has been most kind in aiding the Convention in its various meeting,

BE IT RESOLVED, that the House of Delegates express its thanks for the Medical Society to the Ministerial Alliance.

G. Robinson Auditorium, Commercial Exhibitors, Scientific Exhibitors, Arkansas Heart Association, Arkansas Tuberculosis Association, University of Arkansas Medical Center, Greater Little Rock Chamber of Commerce.

WHEREAS, as the following were most instrumental in making the 85th Annual Session a great success,

BE IT RESOLVED, that the House of Delegates express its thanks for the Medical Society to:

The Robinson Auditorium

The Commercial Exhibitors

The Scientific Exhibitors

The Arkansas Heart Association

The Arkansas Tuberculosis Association

The University of Arkansas Medical Center

The Greater Little Rock Chamber of Commerce

PROCEEDINGS

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY 1961-1962

President	William A. Snodgrass, Jr., Donaghey Bldg., Little Rock
President-elect	H. King Wade, Jr., 231 Central, Hot Springs
First Vice President	M. E. Blanton, Jonesboro
Second Vice President	Charles W. Reid, 1113 Cherry, Pine Bluff
Third Vice President	L. E. Drewrey, 222 Van Buren St., N.W., Camden
Secretary	H. Elvin Shuffield, Donaghey Bldg., Little Rock
Secretary Emeritus	W. R. Brooksher, 318 North Greenwood, Fort Smith
Treasurer	Ben N. Saltzman, Mountain Home
Speaker, House of Delegates	C. Lewis Hyatt, Monticello
Vice Speaker, House of Delegates	J. P. Price, Jr., Monticello
Journal Editor	Alfred Kahn, Jr., 1300 West Sixth, Little Rock
Delegates to AMA	J. M. Kolb, Clarksville; Fount Richardson, Fayetteville
Alternate Delegates to AMA	C. C. Long, Ozark; J. W. Kennedy, Arkadelphia
Executive Secretary	Mr. Paul C. Schaefer, P.O. Box 1345, Fort Smith

EXECUTIVE COMMITTEE OF THE COUNCIL

Chairman of the Council	Joe Verser, Harrisburg
President	William A. Snodgrass, Donaghey Bldg., Little Rock
President-elect	H. King Wade, Jr., 231 Central, Hot Springs
Secretary	H. Elvin Shuffield, Donaghey Bldg., Little Rock

COUNCILORS

District	Councilor Term expires '62	Councilor Term expires '63	Counties in District
1.	Joe Verser Harrisburg	Eldon Fairley Osceola	Clay, Craighead, Crittenden, Fulton, Greene, Lawrence, Mississippi, Poinsett, Randolph, and Sharp
2.	Hugh R. Edwards Searcy	Paul Gray Batesville	Cleburne, Conway, Faulkner, Independence, Izard, Jackson, Stone, and White
3.	K. E. Beaton Wynne	Fred B. Stone Stuttgart	Arkansas, Cross, Lee, Lonoke, Monroe, Phillips, Prairie, St. Francis, and Woodruff
4.	H. W. Thomas Dermott	T. E. Townsend 1310 Cherry Pine Bluff	Ashley, Chicot, Desha, Drew, Jefferson, and Lincoln
5.	J. L. Dedman 415 Hospital Dr. Camden	George C. Burton Med. Arts Bldg. El Dorado	Bradley, Calhoun, Cleveland, Columbia, Dallas, Ouachita, and Union
6.	John P. Wood Mena	Karlton H. Kemp 408 Hazel Texarkana	Hempstead, Howard, LaFayette, Little River, Miller, Nevada, Pike, Polk, and Sevier
7.	Martin Eisele 101 Whittington Hot Springs	J. W. Kennedy Arkadelphia	Clark, Garland, Grant, Hot Spring, Montgomery, and Saline
8.	Robert D. Jones Waldon Building Little Rock	Bill Dave Stewart Waldon Building Little Rock	Pulaski
9.	Ross Fowler Harrison	Stanley Applegate Springdale	Baxter, Benton, Boone, Carroll, Madison, Marion, Newton, Searcy, Van Buren, and Washington
10.	L. A. Whittaker 621 South 21st Fort Smith	C. C. Long Ozark	Crawford, Franklin, Johnson, Logan, Perry, Pope, Scott, Sebastian, and Yell

PROCEEDINGS

COMMITTEES

Arkansas Medical Society

1961-1962

COMMITTEE ON CANCER CONTROL

	Term Expires
Masauki Hara, Little Rock	1962
G. R. Siegel, Clarksville	1962
Holden C. McCraney, Fort Smith	1962
Edward M. Cooper, Jonesboro	1963
William B. Harrell, Texarkana	1963
Bill Dave Stewart, Little Rock	1964
Chairman—Jean Gladden, Harrison	1964

COMMITTEE ON MEDICAL LEGISLATION

R. C. Dickinson, Horatio	1962
J. Arnold Henry, Russellville	1962
Joe F. Rushton, Magnolia	1962
Chairman—Elvin Shuffield, Little Rock	1963
Karlton Kemp, Texarkana	1963
T. Duel Brown, Little Rock	1964
W. D. Robertson, Warren	1964
Charles G. Swingle, Marked Tree	1964

COMMITTEE ON PUBLIC HEALTH (Rural Health)

Donald E. Loveless, Booneville	1962
J. P. Williams, Brinkley	1962
Chairman—Ben N. Saltzman, Mtn. Home	1963
O. J. T. Johnston, Batesville	1963
George F. Wynne, Warren	1964
Edgar J. Easley, Little Rock	1964

SUB-COMMITTEE ON MATERNAL AND CHILD WELFARE

J. O. Porter, Jr., Little Rock	1962
Chair.—Charles P. Wickard, Little Rock	1963
Thomas E. Townsend, Pine Bluff	1964

SUB-COMMITTEE ON INDUSTRIAL HEALTH

C. Randolph Ellis, Malvern	1962
Chaney W. Taylor, Batesville	1962
E. Frank Reed, Jr., Pine Bluff	1963
Wright Hawkins, Fort Smith	1963
Chair.—John G. Watkins, Jr., Little Rock	1964
Jack W. Kennedy, Arkadelphia	1964

SUB-COMMITTEE ON TUBERCULOSIS

David P. Hefner, Mena	1962
M. L. Godley, Blytheville	1962
Harley C. Darnall, Fort Smith	1963
Hugh A. Browne, Alexander	1963
Richard V. Ebert, Little Rock	1964
Chair.—Sanford C. Monroe, Pine Bluff	1964

SUB-COMMITTEE ON MENTAL HEALTH

Charles D. Yohe, Hot Springs	1962
Dwight W. Gray, Marianna	1962
Hayden Donahue, Little Rock	1963
Chair.—William P. Kolb, Little Rock	1963
W. O. Young, Little Rock	1964
Henry M. Sims, Fort Smith	1964

SUB-COMMITTEE ON LIAISON WITH THE STATE BOARD OF HEALTH

	Term Expires
W. R. Scarborough, Clarksville	1962
Chairman—Hugh R. Edwards, Searcy	1963
Harold B. Hawley, Little Rock	1964

POLIO ADVISORY SUB-COMMITTEE

Roger Bost, Fort Smith	1962
R. H. Manley, Clarksville	1962
Chairman—B. P. Briggs, Little Rock	1963
Thomas E. Townsend, Pine Bluff	1963
G. Max Thorn, North Little Rock	1964
Eli Gary, Arkadelphia	1964

COMMITTEE ON MEDICAL EDUCATION

Guy R. Farris, Little Rock	1962
Thomas H. Wortham, Jacksonville	1962
W. H. Calaway, Batesville	1963
Euclid M. Smith, Hot Springs	1963
Chairman—C. C. Long, Ozark	1964
Daniel H. Autry, Little Rock	1964

SUB-COMMITTEE ON POSTGRADUATE EDUCATION

C. C. Long, Ozark	1962
Willis E. Brown, Little Rock	1963
Chairman—C. Lewis Hyatt, Monticello	1964

COMMITTEE ON HOSPITALS

Chairman—Guy Shrigley, Clarksville	1962
A. E. Thorne, Van Buren	1962
Paul Gray, Batesville	1963
William L. Davis, Searcy	1963
Rodger Dickinson, DeQueen	1964
Amail Chudy, North Little Rock	1964

SUB-COMMITTEE ON LIAISON WITH BLUE CROSS-BLUE SHIELD

J. Warren Murry, Fayetteville	1962
Russell W. Cobb, Malvern	1962
Chairman—A. S. Koenig, Fort Smith	1963
Henry Hearnberger, Stephens	1963
John Laurens, Little Rock	1964
Thomas E. Townsend, Pine Bluff	1964

COMMITTEE ON PUBLIC RELATIONS

Chair.—Fount Richardson, Fayetteville	1962
R. B. Robins, Camden	1962
C. Lewis Hyatt, Monticello	1963
Jimmie E. Lytle, Batesville	1963
John McC. Smith, Little Rock	1964
Albert R. Hammon, Harrison	1964

SUB-COMMITTEE ON STATE HEALTH AND MEDICAL RESOURCES FOR CIVIL DEFENSE

Chairman—M. D. McClain, Little Rock	1962
Wm. C. Hensley, Charleston	1963
Keller Lieblong, Conway	1964

SUB-COMMITTEE ON LIAISON WITH AUXILIARY

Chair.—Wm. A. Snodgrass, Jr., L. R.	1964
Marion H. Wilmoth, Glenwood	1964
Louis K. Hundley, Pine Bluff	1964

PROCEEDINGS

	Term Expires		Term Expires
C. C. Long, Ozark	1964	BUDGET COMMITTEE (Council Committee)	
R. B. Robins, Camden	1964	Chairman—W. R. Brooksher, Fort Smith	
ADVISORY COMMITTEE TO THE MEDICAL ASSISTANTS SOCIETY		Louis K. Hundley, Pine Bluff	
Chair.—Stanley Applegate, Springdale	1962	Ben N. Saltzman, Mountain Home	
James M. Kolb, Clarksville	1963	SENIOR MEDICAL DAY COMMITTEE (Council Committee)	
Kenneth R. Duzan, El Dorado	1964	Chairman—Joseph A. Norton, Little Rock	
COMMITTEE ON VETERANS ADMINISTRATION AFFAIRS		Calvin R. Simmons, Pine Bluff	
John W. Dorman, Springdale	1962	Wayne R. Jones, Berryville	
John D. Ashley, Newport	1963	SPECIAL FEE COMMITTEE (Council Committee)	
Chairman—A. J. Forestiere, Harrisburg,	1964	Chairman—Louis K. Hundley, Pine Bluff	
COMMITTEE ON INSURANCE		James M. Kolb, Clarksville	
Gilbert D. Jay, III, West Memphis	1962	J. J. Monfort, Batesville	
A. S. Koenig, Fort Smith	1962	Jerome Levy, Little Rock	
L. E. Drewrey, Camden	1963	Charles Reid, Pine Bluff	
Guy Farris, Little Rock	1963	(T. E. Townsend, Pine Bluff, temporary substitute)	
Chair.—Thomas Honeycutt, Little Rock	1964	HOSPITAL-INSURANCE-PHYSICIAN COMMITTEE (Council Committee)	
J. F. Kelsey, Fort Smith	1964	L. E. Drewrey, Camden	
COMMITTEE ON ARRANGEMENTS FOR ANNUAL SESSION		Guy Farris, Little Rock	
John Wood, Mena	1962	Thomas D. Honeycutt, Little Rock	
Thomas E. Townsend, Pine Bluff	1962	SUB-COMMITTEE ON LIAISON WITH THE NURSING PROFESSION (Council Committee)	
Herbert Wineland, Pine Bluff	1962	Chairman—Hoyt Choate, Little Rock	
Bill Dave Stewart, Little Rock	1963	Hugh Edwards, Searcy	
Guy Farris, Little Rock	1963	W. E. Morris, Little Rock	
Walter O'Neal, Little Rock	1963	LIAISON WITH STATE WELFARE COMMISSION (Council Committee)	
Chairman—Wm. M. Eisele, Hot Springs	1964	Jerome Levy, Little Rock	
H. King Wade, Jr., Hot Springs	1964	Guy Farris, Little Rock	
D. C. Lee, Hot Springs	1964	C. C. Long, Ozark	
COMMITTEE ON AGING		Elvin Shuffield, Little Rock	
Euclid M. Smith, Hot Springs	1962	T. Duel Brown, Little Rock	
Gordon P. Oates, Little Rock	1962	Rodger Dickinson DeQueen	
Chairman—James M. Kolb, Clarksville	1963	Jack Kennedy, Arkadelphia	
L. E. Drewrey, Camden	1963	B. T. Kolb, Little Rock	
John McC. Smith, Little Rock	1964	Chairman—C. Randolph Ellis, Malvern	
Ben N. Saltsman, Mountain Home	1964	John McC. Smith, Little Rock	
COMMITTEE ON TRAFFIC SAFETY		Charles F. Wilkins, Russellville	
Permanent Chairman—		Robert Jones, Little Rock	
C. Lewis Hyatt, Monticello		LIAISON COMMITTEE WITH VOCATIONAL REHABILITATION (Council Committee)	
Hugh R. Edwards, Searcy	1963	Chairman—Fount Richardson, Fayetteville	
Richard Logue, Little Rock	1963	Vice Chairman—James W. Hawley, Camden	
James G. Stuckey, Little Rock	1963	Elvin Shuffield, Little Rock	
J. B. Wharton, Jr., El Dorado	1963	Robert Watson, Little Rock	
E. Frank Reed, Jr., Pine Bluff	1964	J. J. Monfort, Batesville	
Henry V. Kirby, Harrison	1964	Thomas M. Durham, Hot Springs	
W. R. Lee, Hot Springs	1964	S. Wright Hawkins, Fort Smith	
Archie Hewett, Fort Smith	1964	C. C. Long, Ozark	
SUB-COMMITTEE ON PHYSICAL FITNESS AND SCHOOL HEALTH		H. W. Thomas, Dermott	
Chairman—Roger Bost, Fort Smith	1962	J. P. Williams, Brinkley	
Samuel B. Phillips, Little Rock	1963	Thomas D. Honeycutt, Little Rock	
Earle D. McKelvey, Paragould	1964	M. D. McClain, Little Rock	
COMMITTEE ON CONSTITUTIONAL REVISION (Council Committee)		Joseph P. Hickey, Little Rock	
Chairman—Louis K. Hundley, Pine Bluff		J. P. Ward, Little Rock	
H. W. Thomas, Dermott		Jerome Levy, Little Rock	
John M. Hundley, Little Rock			
W. J. Butt, Fayetteville			
H. King Wade, Jr., Hot Springs			

PROCEEDINGS

1961 OFFICERS — COUNTY MEDICAL SOCIETIES — ARKANSAS MEDICAL SOCIETY

- ARKANSAS—Pres., Fred Stone, Stuttgart
Secy., T. S. Van Duyn, Stuttgart
- ASHLEY—Pres., R. L. Salb, Crossett
Secy., L. E. Edwards, Crossett
- BAXTER—Pres., Walter S. Guinee, Mountain Home
Secy., Ben N. Saltzman, Mountain Home
- BENTON—Pres., Harry M. White, Rogers
Secy., Grier D. Warren, Rogers
- BOONE—Pres., Kenneth Siler, Harrison
Secy., Rhys Williams, Harrison
- BRADLEY—Pres., W. C. Whaley, Warren
Secy., W. D. Robertson, Warren
- CARROLL—Pres., Ross Van Pelt, Eureka Springs
Secy., Oliver Wallace, Green Forest
- CHICOT—Pres., V. H. Marques, Lake Village
Secy., A. G. Talbot, Lake Village
- CLARK—Pres., Lewis B. Tilley, Arkadelphia
Secy., J. W. Kennedy, Arkadelphia
- CLEBURNE—Pres., C. G. Pearce, Heber Springs
Secy., W. M. Wells, Heber Springs
- COLUMBIA—Pres., Charles Weber, Magnolia
Secy., John Ruff, Magnolia
- CONWAY—Pres., Gastor B. Owens, Morrilton
Secy., Jack E. Mobley, Morrilton
- CRAIGHEAD-POINSETT—Pres., Edward M. Cooper, Jonesboro
Secy., Herman Alston, Jonesboro
Treas., J. H. McCurry, Cash
- CRAWFORD—Pres., A. E. Thorne, Van Buren
Secy., J. N. Thicksten, Alma
- CRITTENDEN—Pres., Milton Deneke, West Memphis
Secy., James Fall, West Memphis
- CROSS—Pres., Thomas G. Price, Wynne
Secy., Robert A. Hayes, Wynne
- DALLAS—Pres., E. E. Estes, Fordyce
Secy., John H. Delamore, Fordyce
- DESHA—Pres., Goree Biscoe, Dumas
Secy., Guy U. Robinson, Dumas
- DREW—Pres., A. K. Busby, Monticello
Secy., J. B. Holder, Monticello
- FAULKNER—Pres., C. A. Archer, Jr., Conway
Secy., Robert Taylor, Conway
- FRANKLIN—Pres., Wm. C. Hensley, Charleston
Secy., David L. Gibbons, Ozark
- GARLAND—Pres., Cecil Parkerson, 1421 Central, Hot Springs
Secy., James H. French, 101 Whittington, Hot Springs
- GRANT—Pres., Jack M. Irvin, Sheridan
Secy., Miles F. Kelly, Sheridan
- GREENE-CLAY—Pres., Hillard Duckworth, Piggott
Secy., Donald I. Purcell, Paragould
- HEMPSTEAD—Pres., Forney G. Holt, Hope
Secy., Lynn Harris, Hope
- HOT SPRING—Pres., John D. Wise, Malvern
Secy., John W. Cole, Malvern
- HOWARD-PIKE—Pres., Ed G. Hopkins, Jr., Nashville
Secy., G. J. Floyd, Jr., Murfreesboro
- INDEPENDENCE—Pres., Chaney Taylor, Batesville
Secy., Jimmie E. Lytle, Batesville
- JACKSON—Pres., John Wright, Newport
Secy., John D. Ashley, Newport
- JEFFERSON—Pres., Howard Stern, 1315 Linden, Pine Bluff
Secy., William Joe James, 1202 Cherry, Pine Bluff
- JOHNSON—Pres., J. M. Kolb, Sr., Clarksville
Secy., W. R. Scarborough, Clarksville
- LAFAYETTE—Pres., Willie J. Lee, Stamps
Secy., Howard R. Harris, Lewisville
- LAWRENCE—Pres., J. J. Whittington, III, Walnut Ridge
Secy., J. B. Elders, Walnut Ridge
- LEE—Pres., William C. Hays, Marianna
Secy., Floyd S. Dozier, Marianna
- LINCOLN—Pres., James W. Freeland, Star City
Secy., Richard C. Petty, Star City
- LITTLE RIVER—Pres., H. A. McPherson, Jr., Ashdown
Secy., N. W. Peacock, Jr., Ashdown
- LOGAN—Pres., James T. Smith, Paris
Secy., Charles McD. Smith, Paris
- LONOKE—Pres., Henry H. Good, England
Secy., B. E. Holmes, Lonoke
- MADISON—Pres.,
Secy., Charles B. Beeby, Huntsville
- MILLER—Pres., Frank P. Cantrell, 619 Main, Texarkana
Secy., Betty Ann Lowe, 401 East 5th, Texarkana
- MISSISSIPPI—Pres., C. R. Cole, Blytheville
Secy., Eldon Fairley, Osceola
- MONROE—Pres., Jere Long, Brinkley
Secy., W. L. Walker, Brinkley
- NEVADA—Pres., Glenn G. Hairston, Prescott
Secy., Charles A. Hesterly, Prescott
- OUACHITA—Pres., W. H. Pruitt, Camden
Secy., R. B. Robins, Camden
- PHILLIPS—Pres., Reuben L. Chrestman, Helena
Secy., William B. Connolly, Helena
- POLK—Pres., David P. Hefner, Mena
Secy., Henry N. Rogers, Mena
- POPE-YELL—Pres., Brooks Teeter, Russellville
Secy., Ernest King, Russellville
- PULASKI—Pres., John William Smith, 1415 West 6th, Little Rock
Recording Secy., Carl Wenger, 721 West 2nd, Little Rock
Executive Secy., Gaston G. Fulmer, Donaghey Building, Little Rock
- RANDOLPH—Pres., M. A. Baltz, Pocahontas
Secy., Thomas B. DeClerk, Pocahontas
- SALINE—Pres., Curtis W. Jones, Jr., Benton
Secy., James C. Bethel, Bauxite
- SCOTT—Pres.,
Secy.

PROCEEDINGS

SEARCY—Pres., John Williams, Marshall
Secy., John A. Hall, Clinton

SEBASTIAN—Pres., James Thompson, 605 Lexington, Fort Smith

Secy., Morton Wilson, 1500 Dodson, Fort Smith

SEVIER—Pres., Charles Jones, DeQueen

Secy., Rodger Dickinson, DeQueen

ST. FRANCIS—Pres., A. M. Bradley, Forrest City

Secy., A. F. Barr, Forrest City

UNION—Pres., Peter J. Trinca, 430 S. W. Avenue, El Dorado

Secy., Berry L. Moore, Jr., 106½ N. Washington, El Dorado

WASHINGTON—Pres., James D. Mashburn, 212 North College, Fayetteville

Secy., Wilbur G. Lawson, 212 North College, Fayetteville

WHITE—Pres., Wm. L. Davis, Searcy

Secy., Hugh R. Edwards, Searcy

WOODRUFF—Pres., Fred C. Inman, McCrory

Secy., C. E. Dungan, Augusta

37th Annual Session
Woman's Auxiliary
to the
ARKANSAS MEDICAL SOCIETY

Hotel Marion

Little Rock

April 16-19, 1961



Mrs. Hershel Wilmoth
Glenwood

President, Woman's Auxiliary to the Arkansas
Medical Society, 1961-1962

PROCEEDINGS

37th Annual Session, Woman's Auxiliary to the Arkansas Medical Society

Auxiliary members who attended the 37th annual session of the Woman's Auxiliary to the Arkansas Medical Society in Little Rock April 16-19 were guests of President Mrs. C. C. Long and President-Elect Mrs. Hershel Wilmoth at coffee Sunday afternoon from 4 to 5 p.m. in the El Toro Room of the Marion Hotel, convention headquarters. Sunday night's program included a social hour and various open houses for both doctors and auxiliary members, hosted by members of the Pulaski Medical Society.

Mrs. Merlin J. Kilbury of Pulaski County Medical Auxiliary was hostess for the pre-convention Board Meeting and Breakfast Monday morning, April 17, 1961, also in the El Toro Room of the hotel. Following this the convention formally opened in the Continental Dining Room, when the President, Esther Long, called the general session to order. Mrs. T. D. Brown, chaplain, gave the invocation.

Special guests at the morning session were:

Mrs. M. H. Wilmoth, Glenwood, President-Elect

Dr. J. J. Monfort, Batesville, President of the Arkansas Medical Society

Mrs. William Mackersie, President of the Woman's Auxiliary to the American Medical Association

Mrs. Kalford Howard, President of Southern Medical Auxiliary

Paul C. Schaefer of Fort Smith, Executive Secretary of the Arkansas Medical Society

Mrs. Merlin J. Kilbury, President-Elect of Pulaski County Medical Auxiliary, who gave the welcome address

Mrs. Frank Adams, Hot Springs, who responded to the welcome

Mrs. Mason G. Lawson, Convention Chairman

Mrs. Gordon P. Oates, Co-chairman

Monday's luncheon honored Mrs. Kalford Howard, President of Southern Medical Auxiliary, and officers and committee chairmen of the Arkansas Medical Auxiliary, and was held in the Continental

Room of the Marion. Aubrey Gates of the Field Service Division of the AMA central office in Chicago, was a special guest at the luncheon, and urged members to participate in Operation Coffee Cup. These are coffees held by individuals or groups of individuals who are auxiliary members, or friends, for the purpose of writing Congressmen and Senators in protest against the socialistic trend in medical and other legislation. Stationery and stamps, as well as doughnuts and coffee, are provided for the purpose of writing Senators and Congressmen on the spot.

Monday evening auxiliary members and their husbands attended a cocktail party and buffet supper in the Banquet Hall and the Ball Room of the Marion.

Mrs. Hoyt Choate entertained past auxiliary presidents at breakfast at her home Tuesday morning preceding the general session. Election of officers and reports of county presidents were heard at Tuesday's general session, followed by a joint memorial service with the Medical Society at Robinson Auditorium.

Mrs. William Mackersie was honor guest at Tuesday's luncheon at Riverdale Country Club. Mrs. John M. Smith, president of Pulaski County Medical Auxiliary, presided at the luncheon. Tables were decorated with miniature spring bonnets and hat boxes.

Mrs. C. E. Kitchens of Sevier-Polk Medical Auxiliary and a past president of the state auxiliary, gave the invocation, followed by the introduction of Mrs. Mackersie by Mrs. Lawson. Mrs. Mackersie's address was the highlight of the luncheon, and she urged members to participate actively in their auxiliary program.

Mrs. Warren Riley of Union County Medical Auxiliary introduced past auxiliary presidents. Mrs. Robert McCrary, president of Garland County Medical Auxiliary, introduced county auxiliary presidents. Mrs. J. W. Branch, chairman of AMEF, announced the winners of AMEF awards.

Mrs. Long installed new auxiliary officers, who are: President, Mrs. Hershel Wilmoth of Glenwood; President-Elect, Mrs. Frank Padberg of Little Rock; First

PROCEEDINGS

Vice-President (Northeast District), Mrs. Porter Rodgers of Searcy; Second Vice-President (Southeast District), Mrs. John M. Smith, Little Rock; Third Vice-President (Southwest District), Mrs. J. Frank Clark, El Dorado; Fourth Vice-President (Northwest District), Mrs. Charles Wilkins, Russellville; Recording Secretary, Mrs. L. A. Whittaker, Jr., Fort Smith; Treasurer, Mrs. W. G. Cooper, Little Rock.

A brief post convention board meeting was held by Mrs. Wilmoth immediately following the luncheon.

Tuesday night a dinner and dance was held at the Hotel with the Arkansas Medical Society, at which time Dr. William A. Snodgrass of Little Rock was installed as President of the Medical Society by Dr. J. J. Monfort of Batesville, outgoing president.

Editorial

The Service Areas of the Medical Society

ALFRED KAHN, JR., M.D.

One of the never ending hassles in politics, business, and even medicine is the sense of rivalry that exists between the small communities and the larger nearby cities. This should never exist. The relationship is symbiotic and complementary, not antagonistic.

The cities are service areas for the smaller communities, particularly in the field of medicine. This is not unlike the echelons of service in the military forces. Repairs, even of a major type, which could be carried out rapidly in the field were performed there and called first echelon service. Longer, more time consuming work was shipped progressively to the rear echelons, where there was an opportunity for more time consuming repairs. The general physician is busy and his time is valuable. If a patient's illness is time consuming, the patient can be referred to the service areas for a more leisurely therapeutics in a nearby metropolitan area. There can hardly be a quarrel that both services are necessary.

Yet at times the city folk feel that they are neglected in the field of organized medicine, and the physician from the smaller town feels that he is overlooked in the division of medical society offices.

Viewing the structure of organized medicine, one cannot help but be impressed that it attempts to avoid this pitfall. The county medical societies give the city physician ample scope for their organizational medicine; they can have their own scientific programs, public relations bureaus, social functions, etc. The smaller community physician is more dependent on the state medical society, and as his need is greater should command

greater attention from the state society in Arkansas. For another reason the small town physician merits some additional consideration in selection of offices and organizational jobs: the state medical societies are geographic units and should be representative of a region, not just the bigger localities.

The other side of the coin is that since the cities contribute heavily financially to the state organization some recognition of their special problems should be accorded. A good example is the need for understanding and mutual good will in the relationship between the Arkansas Medical Society and the University of Arkansas School of Medicine. Excellent relationships have usually obtained, and this has worked to the benefit of both the Medical School and the Little Rock practitioners. Also, in the case of metropolitan areas, their central geographic location has resulted in some activities being relegated to this area; it is no desire on the part of their physicians to obtain more attention, but usually has been arranged for the convenience of out-in-the-state members. This is especially applicable to areas such as Pine Bluff, Fort Smith, Texarkana, Little Rock, etc., all of which have similar problems. By and large, the city medical societies have no desire to control State Medical Society installations that happened to be located in their area, nor should they; their County Medical Societies are for local function.

Arkansas seems to be most fortunate in the good relationships enjoyed between the metropolitan area societies and the smaller societies. This works vastly to the patient's benefit, which is the ultimate aim of organized medicine.

MEDICINE IN THE NEWS

From Washington Office, AMA:

The Month in Washington

Washington, D. C.—The seriousness of the national problem of mental illness was emphasized on three fronts recently in the nation's capital.

First, the Joint Commission on Mental Illness and Health reported on a comprehensive five-year study of the overall problem. Second, another special government advisory committee recommended smaller community-sized mental institutions after a two-year study of facilities for care of the mentally ill. Third, a Senate subcommittee held hearings on the constitutional rights of mental patients.

The Joint Commission recommended sweeping reforms in the treatment of mental illness as well as expanded and improved facilities. It said some gains had been made in the past 10 years but that the need for adequate facilities for humane, healing treatment of the mentally ill is still largely unmet.

More than half of the patients in state mental hospitals do not receive any treatment, largely because of inadequate facilities, the commission said.

The commission recommended that government spending at all levels—federal, state and local—for public mental patient services be stepped-up in the next decade from the present \$1 billion a year to \$3 billion a year.

Another recommendation was that there be a fully-staffed, full-time mental health clinic for each 50,000 of population.

Dr. Luther L. Terry, Surgeon General of the Public Health Service, urged state governors to use the advisory committee's recommendations as guidelines for improving mental health facilities.

The Food and Drug Administration after the government filed suit against two drug firms for counterfeiting, reported that an extensive investigation showed that there is still relatively little counterfeiting of drugs.

Of 2,700 samples of drugs collected from 900 drugstores in the first three months

of this year, only nine were found to be counterfeit.

FDA ordered manufacturers, effective May 27, to supply samples of new drugs for testing by the government agency prior to clearance for sale.

In the past, the FDA has relied largely on scientific data supplied by the manufacturers themselves in clearing a new drug as being safe for sale. The FDA tested the drugs only on a limited and occasional basis and after they had been put on the market.

The government is spending \$4.1 billion a year in the health field, a Senate Government Operations Subcommittee reported. In the most detailed report of its kind ever published by a governmental group, the Subcommittee, headed by Sen. Hubert H. Humphrey (D., Minn.), noted that \$1.1 billion of the total cares for sick members of the armed forces and their dependents in hospitals. The tab for Civil Service workers' sick leave totals \$315 million a year. About \$650 million a year is spent on medical research, with most of this carried out by the National Institutes of Health and the Veterans Administration.

The government ordered 250 physicians drafted this year due to the failure of enough interns to sign up for military service. It is the first physicians draft in four years. All of the draftees will be assigned to the Air Force. A department spokesman said the draft call would not prevent individual physicians finishing internship this year from volunteering for Air Force medical duty.

Among the 15 outstanding members of medical school faculties who will share in the \$250,000 annual Lederle Medical Faculty Awards program is Dr. Jerome K. Sherman, University of Arkansas Medical School. The program is administered by an independent awards committee composed of seven leading medical educators. The purpose of the awards is to assist able men and women to achieve their objective of full time academic and research careers and to enable medical schools develop promising clinical teachers and scholars.

Since the program started in 1954, Lederle has allocated more than \$2 million to 120 faculty members in 59 United States and Canadian medical schools.

EXPENDITURES OF THE FOUR-YEAR MEDICAL SCHOOLS IN THE U. S. — 1959

Figure 1 and Figure 2 on the following page were constructed from the expenditure data reported by the four-year medical schools in the U. S. for the year 1958-59. Figure 1 shows, on the left side, expenditures for the 44 private medical schools from funds available for basic operations, ranked in order of dollar amounts of expenditures, and on the right side, the corresponding dollar values of expenditures from funds designated for sponsored research. (The percentages indicate the proportional relationship between the amounts expended from funds designated for research and those available for basic operations.) Figure 2 provides the same information for the 37 public medical schools.

Comparison of the two figures reveals that so far as expenditures from funds designated for sponsored research are concerned, the average expenditures for the private schools are greater than those for public schools, i.e., \$1.6 versus \$1.2 million. The reverse is true for expenditures from funds available for basic operations: \$2.6 million for public and \$2.4 million for private schools.

It is also very apparent that while those schools with high expenditures from funds available for basic operations tend also to have large expenditures from funds designated for sponsored research, the extremes in range for both types of expenditures are great.

Expenditures from funds available for basic operations range from less than \$1 million to approximately \$6.5 million for the private schools; from \$1.1 to \$6.6 million for public schools. Expenditures from funds designated for sponsored research vary from \$0.2 million to \$5.5 million for private schools; from \$0.1 million to \$4.3 million for public schools.

The proportional relationship of funds designated for sponsored research to those available for basic operations varies widely from school to school. This variation ranges from 15% to 120% for private schools

(Fig. 1) and from 8% to 127% for public schools (Fig. 2).

The above noted discrepancies between the expenditures for private and public schools, and the complete dissimilarity in the amounts and proportional relationships between the two types of expenditures suggest that medical schools may not recognize any common policy or objectives concerning the extent to which expenditures for sponsored research should be related to their other responsibilities. As our schools undertake to review such questions, it is important in each instance to appreciate the total investment that is being made in research. It is well known that expenditures from funds designated for sponsored research represent but a portion of the cost of a school's total program of research. For one thing, the indirect costs of sponsored research are greater than the allowances provided for them in the grants. The average allowance for indirect costs on all grants for sponsored research for all schools in 1959 was approximately 12%. For the year 1958 the National Science Foundation, using the "Blue Book Formula," established that the actual range of such indirect costs varied between schools from 18% to more than 50% of the grants, with an overall average of 25% for all schools. (See Datagram Vol. 1, No. 12, June 1960.)

But more important than this, early returns from the Association's study of program costs indicate that the total net investment in research per school, over and above the amounts from sponsored grants and the overhead allowances provided, range from \$133,753 to \$1,405,000. The returns are not yet sufficient to ascertain whether there exists any consistent correlation between the size of a school's sponsored research program and the net financial impact upon funds available for its basic operations. Undoubtedly in many instances it will be considerable.

All of this emphasizes the importance of the Association's study of medical college program costs that is presently under way. While figures indicating the total expenditures (see Datagram Vol. 2, No. 8B, February 1961) and expenditures by source of income (see J.A.M.A. Vol. 174, p. 1433, Nov. 12, 1960) are important, their proper use for re-evaluating objectives and planning for the future can only be accom-

**EXPENDITURES FROM FUNDS AVAILABLE FOR BASIC OPERATIONS
AND FROM FUNDS DESIGNATED FOR SPONSORED RESEARCH
FOR EACH OF 44 FOUR-YEAR PRIVATE AND 37 FOUR-YEAR PUBLIC MEDICAL SCHOOLS — 1959**

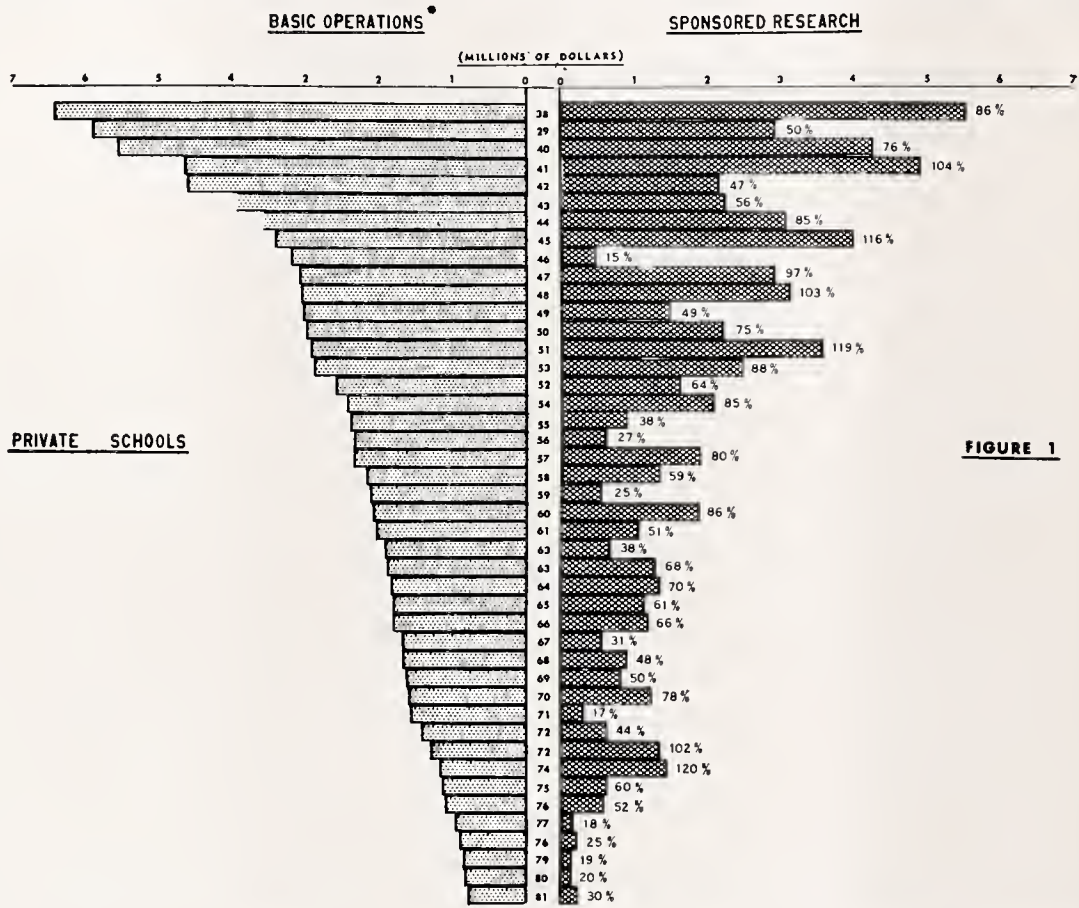


FIGURE 1

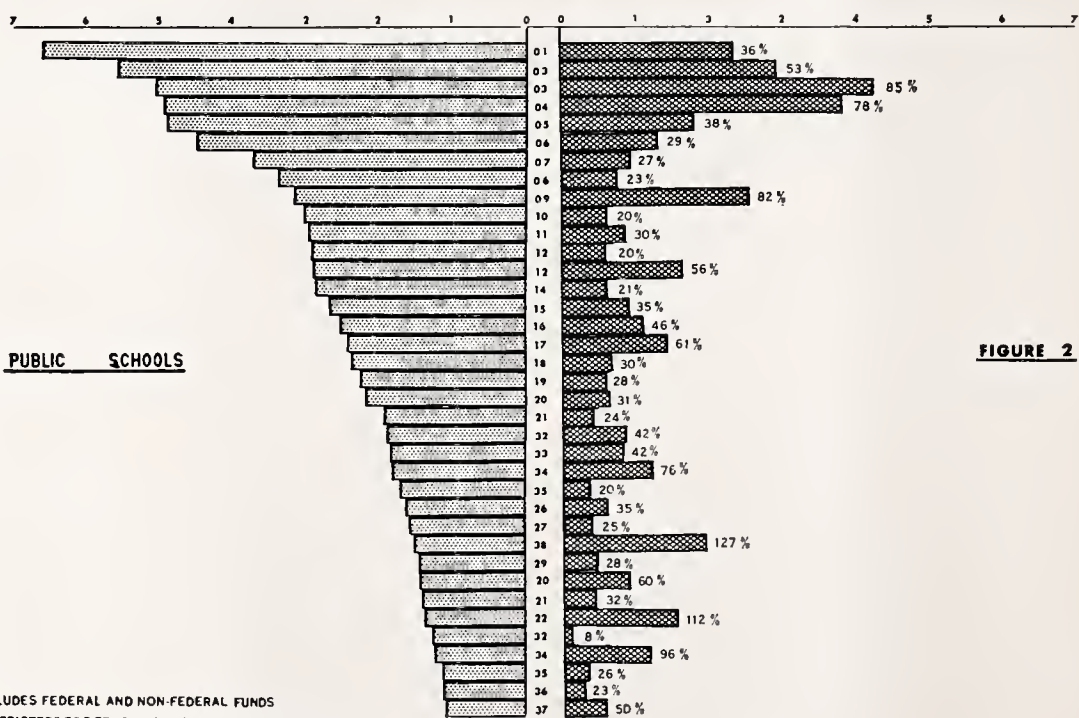


FIGURE 2

• INCLUDES FEDERAL AND NON-FEDERAL FUNDS
"RESTRICTED" FOR TEACHING AND TRAINING AND FUNDS.
GRANTS, GIFTS OR ENDOWMENT INCOME "RESTRICTED"
FOR PURPOSES OTHER THAN RESEARCH EXCLUSIVE OF STUDENT AID

plished in light of the knowledge concerning costs-and also the facts that explain the costs-of each of the many educational, research and service programs that characterize the manifold responsibilities of the modern school of medicine.

ANNOUNCEMENTS

The Arthritis and Rheumatism Foundation offers predoctoral, postdoctoral and senior investigatorship awards in the fundamental sciences related to arthritis for the work beginning July 1, 1962. Deadline for applications is October 31, 1961. For further information and application forms, address the Medical Director, Arthritis and Rheumatism Foundation, 10 Columbus Circle, New York 19, N. Y.

The University of Illinois College of Medicine Department of Otolaryngology will offer an intensive postgraduate basic and clinical program under the direction of Doctor Emanuel M. Skolnik September 23-30, 1961. Interested physicians should write direct to the Department of Otolaryngology, University of Illinois College of Medicine, 1853 West Polk Street, Chicago 12, Illinois.

Dates to Remember

1961 Annual Meeting AMA
New York, N. Y.

June 26-30, 1961

Annual Meeting, Arkansas Academy
of General Practice, Little Rock

Oct. 11-12, 1961

1961 Clinical Meeting AMA
Denver, Colorado

Nov. 27-30, 1961

Proceedings of Societies

Dr. Edward M. Cooper has been installed as president of the Craighead-Poinsett Medical Society for 1961 and Dr. H. D. Alston recording secretary and Dr. J. H. McCurry of Cash was elected as lifetime secretary.

Dr. Robert Erle Merrill, assistant medical director of the Vanderbilt Respiratory and Rehabilitation Center, was guest speaker at the dinner meeting of the Bowie-Miller Medical Society in March. Dr. Merrill discussed the type diseases and birth defects that are being treated and diagnosed at the Vanderbilt Center. He gave comprehensive survey reports of birth defects and the rise and fall in the number of various diseases of children. He explained that a major portion of the expense of the research center is paid by the National Foundation, which is now working with all type birth defects and crippling diseases in addition to polio.

A business meeting was held following Dr. Merrill's talk and slide program.

The Second District Medical meeting was held in Batesville on Doctors' Day, March 30th. Doctors and their wives were present from Newport, Heber Springs, Searcy, Mountain View and Batesville. The program was presented by Mr. John Morrow, a local historian and an authority on General Nathan Bedford Forrest, who gave a talk on the life of Dr. John Wyeth. Dr. Wyeth practiced in and around Augusta, Arkansas right after the Civil War and later returned to New York City after postgraduate study in Europe. There he formed the New York Poly Clinic Postgraduate Hospital which was the first institution of its kind in the U. S. He later became president of the American Medical Association. Mr. Morrow had researched the talk thoroughly and it was a very fascinating presentation. Discussion of legislation involving the Anderson-King Bill was conducted first by the president of the Auxiliary, Mrs. Sarah Keller of Mountain View and by Dr. J. J. Monfort, president of the Arkansas Medi-

cal Society. As Dr. Monfort got up to speak, Mrs. Paul Gray interrupted him and presented a "This Is Your Life" program on the life of Dr. Monfort. Several hundred pamphlets of "Socialized Medicine and You" and "Let's Help Those Who Need to be Helped" were distributed.

Obituary

Dr. Rowland Hill Evans, 65, physician of Chatfield (Crittenden County), died March 13, 1961 in a Memphis hospital. He began his medical practice in McCrory, where he lived for 12 years before moving to Chatfield. He was a member of the Arkansas, Southern and American Medical Societies and the Phi Ki medical fraternity. He was a Baptist.

Survivors include his widow and two sisters. Funeral services were conducted in Citizens Funeral Chapel in West Memphis and burial was in Forrest Hill Cemetery, Memphis.

Dr. Homer A. Higgins, aged 75, of Winter Park, Florida, died in an Orlando, Fla. hospital. He was a former dean of surgery at the University of Arkansas Medical School. Funeral services and burial were in Little Rock.

Dr. Henry E. Mobley, 70, prominent Morrilton physician, died April 2 and funeral was conducted in the Presbyterian Church with burial in Elmwood Cemetery, Morrilton. He was a native of Logan County and had practiced medicine in Morrilton since 1919. He was a member of the Conway County Medical Society, Arkansas Medical Society and American College of Surgeons and the International College of Surgeons.

He is survived by his widow, Mrs. Emma Louise Metzger Mobley and a son, Dr. Jack Mobley of Morrilton, six brothers, two sisters and three grandchildren.

Dr. Gaylord Floyd McLeod, Magnolia City health officer, died March 18, 1961. He was a native of Mississippi and had

practiced medicine in Columbia County from 1913 to his retirement several years ago. He was a member of the First Presbyterian Church. He is survived by his widow, two sons, a daughter, a sister and six grandchildren. Burial was in the Magnolia Cemetery.

PERSONAL AND NEWS ITEMS

Dr. Anthony T. DePalma, president of the Northwest Arkansas Mental Health Association, attended Region IV Conference of the National Association for Mental Health. This region consists of Arkansas, Iowa, Kansas, Louisiana, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota, and Texas. This was the first meeting of the group and it was held at Winrock April 6, 7, and 8.

Dr. G. F. Wynne has been named president of the Warren Rotary Club for 1961-62. Dr. Wynne has been prominent in civic endeavor and in the work of the First Methodist Church of Warren.

The Arkansas Academy of General Practice held a regional postgraduate seminar at Hope in March. Speakers were Dr. Betty Lowe of Texarkana, Dr. Deane D. Wallace of Little Rock, and Dr. William F. Guerriero of Dallas. Dr. Forney G. Holt was in charge of arrangements.

Dr. Charles T. Wallace, Perryville, Arkansas, has reached his 92nd year, and retired in 1957 after many years practicing medicine in the hill country of Perry County. He is a graduate of the University of Arkansas Medical School, and his group was the first to receive their degrees in gowns. Dr. Wallace says that in the early days of his practice doctors had to go by symptoms since they did not have the aid of X-ray to diagnose illnesses.

Drs. Anderson and Tilley of Arkadelphia announce the association of Dr. Robert W. Hunter in the general practice of

medicine and surgery effective July 1. Dr. Hunter is a graduate of the University of Arkansas School of Medicine, and is completing his internship at St. Vincent's Infirmary with special work in Pediatrics.

Dr. Herbert H. Hollis is a new physician and surgeon in Forrest City and is now associated with **Dr. George T. McPhail**. Dr. Hollis came from Woodbury, Tenn. where he had practiced for some time.

Dr. W. E. Knight, orthopedic surgeon of Fort Smith, was the featured speaker at the noon meeting of the Optimist club of Little Rock in April.

Word has been received of the engagement of **Dr. Gordon Newton** of Camden, and **Miss Annelise Steinbrenner** of Risskov, Denmark. After a May wedding at the Risskov Lutheran Church the couple will make their home in St. Louis, Missouri, where Dr. Newton will be affiliated with Barnes Hospital.

Dr. W. H. Bruce, Jefferson County Health officer for more than 25 years, was honored March 23 with a citation signed by over 1,000 persons. The commendation was called a "Declaration of Appreciation." When Dr. Bruce arrived in Pine Bluff more than 25 years ago to take over the duties as health officer, his headquarters was an office in a second story of a building in downtown Pine Bluff. He personally solicited funds and headed a drive to build and equip a new health department office building. The new building was constructed in 1939 by the WPA.

Dr. Louis O. Lambiotte of Fort Smith, was the moderator at a session of the Arkansas Society of Medical Technologists during its convention in Fort Smith in April.

Dr. G. L. Hardgrave of Clarksville, is another physician who has passed the fifty-year mark in service in the field of medicine. He was born near Clarksville, and after graduating from the Arkansas

University School of Medicine, began practice in his home county in 1911.

New Members . . .

Dr. Thomas Moore Fletcher is a new member of the Pulaski County Medical Society. He is a native of Nashville, Tennessee, and obtained his preliminary education from the Louisiana State University at Baton Rouge, Louisiana. His M.D. degree was obtained from the University of Arkansas School of Medicine in 1953. Dr. Fletcher practiced at the St. Louis City Hospital, July 1953-July 1956; Columbia-Presbyterian Medical Center, New York City, July 1956-January 1961. He is a neurosurgeon at the Medical Center in Little Rock.

Dr. Anthony Frank Isele, 425 West Jackson, Piggott, Arkansas, is a new member of the Greene-Clay County Medical Society. Dr. Isele was born in Memphis, Tennessee; graduated from the University of Tennessee, Knoxville, Tennessee, in 1957 with a B.S. degree. He received his medical education from the University of Tennessee, in Memphis, and graduated from there in 1959. Dr. Isele is a general practitioner and is on the staff of the Piggott Hospital.

A new member of the Saline County Medical Society is **Dr. J. L. Martindale** of Emmet, Arkansas. Dr. Martindale graduated from the Ouachita Baptist College in Arkadelphia, in 1953 with a B.S. degree and in 1957 was graduated from the Arkansas Medical School, in Little Rock. He received two years of training in ENT while serving at the U. S. Army Hospital in Fort Hood, Texas, from 1958 to 1960. Dr. Martindale is on the staff of the Saline County Memorial Hospital and is practicing medicine at 225 South Market Street in Benton.

Dr. John R. Stotts, of Searcy, Arkansas, is now doing general practice at 1401 Main, North Little Rock. Dr. Stotts, a new member of the Pulaski County Medi-

FEATURES

cal Society, received a M.S. degree in Pharmacology from the University of Maryland, Baltimore, in 1953 and in 1959, he graduated from the University of Arkansas School of Medicine, Little Rock. He is an associate staff member at Arkansas Baptist Hospital and at St. Vincent's Hospital.

A new member of the Pulaski County Medical Society is **Dr. David L. Liberman**, neuropsychiatrist. Dr. Liberman was born in Brooklyn, New York, and received his preliminary education at the University of Chicago in Chicago, Illinois. In 1918 he graduated from the University of Illinois having earlier attended Yale University in New Haven, Connecticut. Dr. Liberman has opened his office at 409 Woodlane, Little Rock, after retiring from 40 years of Government service.

An office has been opened at 308 Plaza in West Helena, by **Dr. Evan James Kurts**, new member of the Phillips County Medical Society. Dr. Kurts, a general practitioner, was born in Union, Mississippi, and received his preliminary education at Millsaps College in Jackson, Mississippi. In 1956, he graduated from the University of Tennessee College of Medicine, Memphis, Tennessee. He is the secretary-treasurer on the staff of the Helena Hospital.

Lawrence County Medical Society has a new member from Lynn, Arkansas. He is **Dr. Wayne B. Glenn**, general practitioner. Dr. Glenn graduated in 1958 from the University of Arkansas School of Medicine in Little Rock, having received his preliminary education at Arkansas State College in Jonesboro. He is a member of Lawrence Memorial Hospital medicine staff and is practicing at 101 Pochontas Road in Walnut Ridge, Arkansas.

From Elgin, Texas, comes **Dr. M. Wayne Reynolds** to Saline County Medical Society. He is now practicing at 147 South Market in Benton, Arkansas. In 1951 he received a B.S. degree from Union College in Lincoln, Nebraska, and in 1958, Dr. Reynolds graduated from the College of

Medical Evangelists, Loma Linda, California.

A graduate of 1959 from the University of Tennessee College of Medicine—Memphis—is **Dr. Daniel Tonymon**, new member of the Phillips County Medical Society. Born at Marvell, Arkansas, Dr. Tonymon received a B.A. degree in 1950 from the University of Illinois, Urbana, Illinois. He is on the staff of the Helena Hospital and is practicing in Marvell.

A new member of the Miller County Medical Society is **Dr. Mitchell Young**. He is a native of Texarkana, Arkansas, and obtained his preliminary education at the University of Arkansas at Fayetteville, from which he received a B.S. degree. His M.D. degree was obtained from the University of Arkansas School of Medicine in 1953. Dr. Young practiced from 1953-1955 at St. Louis City Hospital and 1958-1961 at Parkland Memorial Hospital. He is a General Surgeon with his office at 322 East Fifth in Texarkana.

A new member of the Garland County Medical Society is **Dr. D. B. Stough III**. He is a native of Hot Springs, Arkansas, and obtained his preliminary education at the University of Arkansas from which he received a B.S. degree. His M.D. degree was obtained from the University of Arkansas School of Medicine in 1953. Dr. Stough practiced one year at Tyler, Texas, and two years at Miami, Florida. He is a dermatologist with his office in the Medical Office Building in Hot Springs.

Dr. James R. Mayfield is a new member of the Craighead-Poinsett County Medical Society. He is a native of Humboldt, Tennessee, and obtained his preliminary education at the University of Tennessee. He was graduated from the University of Tennessee Medical School in 1954. Dr. Mayfield practiced in Memphis from 1955-1956, U. S. Air Force 1956-1958, and served residency in Anesthesiology from 1958-1960. Dr. Mayfield is an anesthesiologist at the St. Bernard Hospital in Jonesboro.

Dr. William B. Riley, Jr. is a new member of the Pulaski County Medical Society. He is a native of McGehee, Arkansas, and received his preliminary education from the Baylor University in Texas. His M.D. degree was obtained from the University of Arkansas Medical School in 1959. Dr. Riley is a general practitioner with his office at 2213 South Tyler in Little Rock.

Dr. B. G. Parker has been accepted in the Logan County Medical Society. A native of Stilwell, Oklahoma, Dr. Parker received his preliminary education at the University of Fayetteville, and was graduated from the University of Arkansas School of Medicine in 1959. He completed his internship at St. Benedict's Hospital, Ogden, Utah, and has opened his office at 121 E. 3rd in Booneville.

A new member of the St. Francis County Medical Society is **Dr. Marvin L. Purifoy**, 1740 Lindauer Road, Forrest City. Dr. Purifoy was born in Texarkana, Arkansas, and received his preliminary education at the University of Arkansas at Fayetteville. His M.D. degree was received from the University of Arkansas School of Medicine at Little Rock in 1959. After serving an internship at the St. Vincent Infirmary, Little Rock, Arkansas, Dr. Purifoy entered general practice at the above mentioned address.

A new member of the Garland County Medical Society is **Dr. Shelby S. Gamble**. Dr. Gamble was born in Pollock, Missouri, and attended school in Omaha, Nebraska. His M.D. degree was received from the University of Nebraska College of Medicine in 1937. Dr. Gamble is a director of Medical Services, Hot Springs Rehabilitation Center, in Hot Springs.

A new member of the Pulaski County Medical Society is **Dr. Ben M. Lincoln**. Dr. Lincoln was born in Paragould, Arkansas, and attended school at the University of Arkansas at Fayetteville. His M.D. degree was received from the University of Arkansas School of Medicine in 1954. Dr. Lincoln is an instructor in Surgery at the University of Arkansas Medical Center.

Dr. Henry B. Rogers is a new member of the Union County Medical Society. He is a native of El Dorado, Arkansas, and received his preliminary education from the University of Arkansas at Fayetteville, from which he received a B.S. degree. His M.D. degree was obtained from the University of Arkansas School of Medicine in 1955. Dr. Rogers' served in the U. S. Army in France from 1958 to 1960. He is a pediatrician with his office at 516 W. Faulkner, El Dorado.

Woman's Auxiliary

The Columbia County Medical Auxiliary has presented the book "Macmillan Medical Cyclopedia" by William Thompson, to the Columbia-Lafayette Regional Library, honoring all Columbia County doctors on Doctors' Day.

The Greene-Clay County Medical Society Auxiliary honored the doctors in that county with recognition and a red carnation presented to each doctor by Mrs. Hillard Duckworth, president of the Auxiliary.

The Mississippi County Medical Auxiliary sponsored a benefit luncheon and fashion show on April 7 at the Blytheville Country Club. Proceeds derived from this affair will go to the Well Child Clinic to buy polio vaccine.

The Auxiliary honored the doctors of Blytheville and the Blytheville Air Force Base on Doctors' Day with a banquet at the Country Club.

A \$100 donation toward completion of the chapel at the Arkansas Children's Colony was made recently by the Women's Auxiliary to the Pulaski County Medical Society. It was in honor of Pulaski County physicians in connection with "Doctor's Day." Mrs. W. J. Swarz was Doctor's Day chairman.

Book Reviews

W. B. SAUNDERS COMPANY features the following recent books in their full page advertisement appearing elsewhere in this issue:

WHITE—CLINICAL DISTURBANCES OF RENAL FUNCTION

Diagnosis and treatment measures for kidney disorders

RUBIN—THORACIC DISEASES

Covers both medical and surgical management

MAYO CLINIC—DIET MANUAL

Recent advances in food, vitamin and dietary practice

THE CYBERNETICS OF NATURAL SYSTEMS, by D. and K. Stanley-Jones, pp. 145, published by the Pergamon Press, New York, 1960.

Norbert Wiener popularized the theory of feedback and called this science Cybernetics. There has been discussion in the lay literature about this. The authors of this book have used this theory as a means to explore certain biological systems. For example, the authors have studied decerebrate animals and spinal animals to show how reflexes fall into this system of controls. There is one brief discussion of the relationship between cybernetics and acute and chronic poliomyelitis. Of particular interest are the chapters on control of voluntary and involuntary muscles. This book in some ways bears resemblance and relationship to Sherrington's book on INTEGRATION OF THE NERVOUS SYSTEM. This book consists of only 145 pages and is not recommended except to those interested in the wide field of general biology or research, especially in the field of neurology. AK

OCCUPATIONAL DISEASES AND INDUSTRIAL MEDICINE by Rutherford T. Johnstone, M.D., Consultant in Industrial Medicine, Clinical Professor of Preventive Medicine and Public Health, and Clinical Professor of Medicine, University of California at Los Angeles, and Seward E. Miller, M.D., Director, Institute of Industrial Health, Professor of Medicine, Medical School, Professor of Industrial Health, School of Public Health, University of Michigan, Ann Arbor, illustrated pp. 482, published by W. B. Saunders Company, Philadelphia and London, 1960.

Industrial medicine is becoming more and more important. Almost every physician touches on this interesting field in his practice. Johnstone and Miller have written a rather easy-to-read

fundamental textbook on industrial medicine. It is a rather brief book for such a broad field and, therefore, would hardly qualify as a reference book, although it is entirely suitable as a text. This text has paid special attention to chemical agents and this is becoming more and more a factor in industrial medicine. Almost every advance in chemistry brings the problem of what will this drug do to a human being? Some of these chemical hazards are discussed. There is also some discussion of injury from physical agents; this is rather short, however. This book is recommended as a general text or primer in occupational medicine. AK

TUBERCULOSIS ABSTRACTS

Sponsored by
The Arkansas Tuberculosis Association

DRUG RESISTANCE IS INCREASING

JAMES W. RALEIGH, M.D., *Bulletin of the National Tuberculosis Association*, January, 1961.

Studies in the United States and in Great Britain show that drug-resistant tuberculosis in previously untreated patients is on the increase. The public health as well as the clinical implications of this problem must be considered in planning programs in the future.

If tuberculosis is to be eliminated, timing is vital. The principal drugs, streptomycin, isoniazid, and PAS (para-aminosalicylic acid) must be brought to bear while their potential is still at its height and before their value goes swirling down the drain with the widespread emergence of drug-resistant strains of tubercle bacilli.

The present situation with respect to infection by drug-resistant tubercle bacilli is by no means entirely clear.

In 1952, the Veterans Administration-Armed Forces Study Group reported on the initial streptomycin susceptibility pattern of more than 2,000 tuberculosis patients admitted for treatment during the previous year who had no prior chemotherapy. Just over 2.5 per cent of these patients yielded cultures showing "primary," or pretreatment, resistance to streptomycin. It was concluded that streptomycin-resistant tubercle bacilli, however much of a clinical problem they

might be, had not yet become an epidemiologic factor of importance.

INCIDENCE UP

In the Veterans Administration-Armed Forces 1957 study, the incidence of drug-resistant tubercle bacilli in untreated patients was up to 5 per cent. The Medical Research Council of Great Britain in a similar survey of previously untreated patients found primary drug-resistant strains in almost 4 per cent of those tested.

Later reports are even more disquieting. In 1958 two committees of the International Union Against Tuberculosis studied the occurrence of drug-resistant tubercle bacilli in patients admitted consecutively to 72 tuberculosis treatment centers in 17 different countries of Asia, Europe, North and South America. Among 1,400 patients who had had no chemotherapy prior to admission, the incidence of drug-resistant tubercle bacilli ranged from 2.7 per cent to 19 per cent and averaged 6.5 per cent. The United States was well above the average with 8.7 per cent. Simultaneous resistance to two drug occurred in 1.5 per cent; resistance to all three drugs was rare, but all five cases reported were from the United States.

The incidence of bacilli resistant to streptomycin, isoniazid, and PAS in patients with no history of previous treatment is, therefore, on the increase. If the 8.7 per cent incidence is correct for the nation as a whole, and if we have 75,000 new active cases of tuberculosis reported annually in the United States for the next few years, then each year at least 6,000 of the new cases will yield bacilli resistant to one or more of the three major drugs; roughly 2,500 resistant to isoniazid, 2,500 to streptomycin, and the remainder to PAS.

The U. S. Public Health Service has calculated that among the 36 million individuals in this country now infected by tubercle bacilli but not yet ill, the new active case rate will be approximately 85 per 100,000 population per year for the next four or five years. If these relationships hold true, 6,000 new active cases of tuberculosis with drug-resistant bacilli are actually a reflection of more than 7 million individuals now infected by such bacilli,

but not yet manifestly ill with tuberculosis. If the evolution in this group from infection to disease is more frequent or more rapid than usual, the population infected with resistant bacilli may be less than 7 million; if, on the other hand, this transition in those infected with resistant bacilli (particularly isoniazid resistant) is slower or less frequent, the reservoir of drug-resistant tuberculous infection may be even greater than 7 million.

Thus, it seems inescapable that in the drug resistance being discovered with increasing frequency among previously untreated patients, we are seeing only that small segment of the iceberg that rears above the surface.

WHAT PRICE RESISTANCE?

What can be done about this trend? The first step, of course, is to recognize that the emergence of drug-resistant tubercle bacilli is not merely a clinical handicap, but also an epidemiologic fact. Our attitude toward drug resistance must be refocused to recognize its broad public health implication as well as its disadvantages to the individual patient.

Chesterton, in one of his famous paradoxes, is quoted as saying, "Whatever is worth doing is worth doing badly." We sometimes seem to adopt this point of view in insisting that inadequate treatment of tuberculosis is better than no treatment at all. Token treatment with isoniazid alone has been prescribed for patients all over the world, many of them with far advanced tuberculosis, extremely poor nutrition, and socio-economic burdens of crushing magnitude. We will not cure them, we have argued, but a few months of bacteriologic remission and of clinical improvement is justified on public health grounds.

We must now begin to ask ourselves whether widespread infection by drug-resistant tubercle bacilli isn't too high a price to pay for such transitory benefits. What has always been recognized as inferior treatment from a clinical point of view seems now to be losing its justification from the public health point of view. The administration of isoniazid to patients who have no real chance of achieving complete control of their disease with this drug alone may be short-sighted public

health practice as well as second-rate medicine.

Even in underdeveloped areas, the continued use of inadequate chemotherapy as a public health measure is not being recognized for what it is—a two-edged sword which may make the eventual control of tuberculosis in those areas more rather than less difficult than it need be.

Clinicians, too, need to sharpen their public health perspective in prescribing treatment. In planning the treatment of newly-diagnosed patients, information about the drug susceptibility of patients' organisms is essential. With the growing possibility of drug-resistant infection, pretreatment drug susceptibility studies are essential. Much of the delay and much of the reluctance of clinicians to wait for this information before starting treatment could be avoided if susceptibility studies were started routinely on the diagnostic sputum examination.

If for any reason one cannot await the results of pretreatment susceptibility tests, one may initiate treatment with a second-time combination, such as cycloserine and viomycin, or initiate treatment with all three major drugs, each given daily. In either instance, substantial therapeutic progress can be made with little risk and without hazarding the loss of susceptibility to one of the major drugs. Once the laboratory information is available, the drug treatment can be tailored to

provide the most effective combination for the patient's specific needs.

Editor of the Journal of the
Arkansas Medical Society
FIFTY YEAR CLUB
BREAKFAST April 18

It is not merely a conventional matter but a real pleasure that we offer the State Society our appreciation and sincere thanks for their thoughtfulness and generosity for the nice meal and the opportunity it gives this club or group to assemble once each year for a most enjoyable hour.

Dr. H. W. Schmidt from the Mayo Clinic presented a great array of artificial Dry and Wet fly fishing tackle and quite an elaborate talk on the mode of using these. His remarks were a real treat to the Isaac Walton's present.

Our good friend C. Hamilton Moses honored us with wonderful ideas and entertaining humor. We extend our sincere thanks to each speaker.

Dr. Davis W. Goldstein of Fort Smith was installed as president and Dr. J. G. Gladden of Harrison named president-elect. I remain secretary.

Dr. J. H. McCurry, of Cash, Secretary

THE JOURNAL OF THE

ARKANSAS MEDICAL SOCIETY

July, 1961

U.S. MEDICAL CENTER LIBRARY

JUL 25 1961

San Francisco, 22

Vol. 58 No. 2

FORT SMITH, ARKANSAS



**New Product Announcement*

a significant
achievement in
corticosteroid research

HALDRONE™

(paramethasone acetate, Lilly)

- predictable anti-inflammatory effect
- low incidence of untoward reactions

Available in
bottles of
30, 100,
and 500

Tablets Haldronc, 1 mg., Yellow
(scored)

Tablets Haldronc, 2 mg., Orange
(scored)



ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U. S. A.



inside as well as outside the hospital...
staphylococci usually remain sensitive to

CHLOROMYCETIN[®]

(chloramphenicol, Parke-Davis)

That the sensitivity patterns of "street" staphylococci differ widely from those of "hospital" staphylococci is a well-established clinical fact.¹⁻⁵ Although strains of staphylococci encountered in general practice have remained relatively sensitive to a number of antibiotics,⁶ the problem of antibiotic-resistant staphylococci appears to be a threat to all patients in hospitals today. It is encouraging to note, however, "...that a relatively small percentage of strains develop resistance to chloramphenicol, despite the consumption of large amounts of this antibiotic."⁷

In one hospital, for example, CHLOROMYCETIN "...was the only widely used antibiotic to which few of the strains were resistant."⁸ In another hospital, despite steadily increasing use of CHLOROMYCETIN since 1956, "...the percentage of chloramphenicol-resistant strains has actually been lower in subsequent years."¹ Elsewhere, insofar as hospital staphylococci are concerned, it appears that "...the problem of antibiotic resistance can be regarded as minimal for chloramphenicol."²

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals[®] of 250 mg., in bottles of 16 and 100.

See package insert for details of administration and dosage.

Warning: Serious and even fatal blood dyscrasias (aplastic anemia, hypoplastic anemia, thrombocytopenia, granulocytopenia) are known to occur after the administration of chloramphenicol. Blood dyscrasias have occurred after short-term and with prolonged therapy with this drug. Bearing in mind the possibility that such reactions may occur, chloramphenicol should be used only for serious infections caused by organisms which are susceptible to its antibacterial effects. Chloramphenicol should not be used when other less potentially dangerous agents will be effective, or in the treatment of trivial infections such as colds, influenza, viral infections of the throat, or as a prophylactic agent.

Precautions: It is essential that adequate blood studies be made during treatment with the drug. While blood studies may detect early peripheral blood changes such as leukopenia or granulocytopenia, before they become irreversible, such studies cannot be relied upon to detect bone marrow depression prior to development of aplastic anemia.



IN VITRO SENSITIVITY OF 250 STRAINS OF STAPHYLOCOCCI TO CHLOROMYCETIN AND TO FOUR OTHER ANTIBIOTICS*

CHLOROMYCETIN 78%

Antibiotic A 68%

Antibiotic B 55%

Antibiotic C 45%

Antibiotic D 21%

These strains of coagulase-positive staphylococci were isolated from hospitalized patients at a large county hospital during the year 1959. Sensitivity tests were done by the disc method.

*Adapted from Bauer, Perry, & Kirby¹

References: (1) Bauer, A. W.; Perry, D. M., & Kirby, W. M. M.: *J.A.M.A.* 173:475, 1960. (2) Fisher, M. W.: *Arch. Int. Med.* 105:413, 1960. (3) Cohen, S.: *Circulation* 20:96, 1959. (4) Edwards, T. S.: *Am. J. Ophth.* 48, Part II:19, 1959. (5) Smith, I. M.: *Staphylococcal Infections*, Chicago, The Year Book Publishers, Inc., 1958, p. 148. (6) Petersdorf, R. G.; Rose, M. C.; Minchew, H. B.; Keene, W. R., & Bennett, I. L., Jr.: *Arch. Int. Med.* 105:398, 1960. (7) Editorial: *J.A.M.A.* 173:544, 1960. (8) Finland, M.; Jones, W. F., Jr., & Bennett, I. L., Jr.: *Arch. Int. Med.* 104:365, 1959.

51461

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

THE Journal OF THE Arkansas Medical Society

Owned by
THE ARKANSAS MEDICAL SOCIETY
And Published Under Direction of the Council

ALFRED KAHN, JR., M.D., Editor
1300 West Sixth Street Little Rock, Arkansas
MR. PAUL C. SCHAEFER, Business Manager
218 Kelley Bldg. Fort Smith, Arkansas
LITTLE ROCK BUSINESS OFFICE
114 E. Second St. Little Rock, Arkansas

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY

WM. A. SNODGRASS, JR., President..... Little Rock
H. KING WADE, JR., President-Elect..... Hot Springs
M. E. BLANTON, First Vice-President..... Jonesboro
CHARLES W. REID, Second Vice-President..... Pine Bluff
L. E. DREWREY, Third Vice-President..... Camden
H. ELVIN SHUFFIELD, Secretary..... Little Rock
W. R. BROOKSHER, Secretary Emeritus..... Fort Smith
BEN N. SALTZMAN, Treasurer..... Mountain Home
C. LEWIS HYATT, Speaker, House of Delegates, Monticello
J. P. PRICE, JR., Vice Speaker,
House of Delegates..... Monticello
MR. PAUL C. SCHAEFER, Executive Secretary,
P. O. Box 1345..... Fort Smith

COUNCILORS

First District	JOE VERSER.....	Harrisburg
	ELDON FAIRLEY.....	Osceola
Second District	HUGH R. EDWARDS.....	Searcy
	PAUL GRAY.....	Batesville
Third District	K. E. BEATON.....	Wynne
	FRED B. STONE.....	Stuttgart
Fourth District	H. W. THOMAS.....	Dermott
	T. E. TOWNSEND.....	Pine Bluff
Fifth District	J. L. DEDMAN.....	Camden
	GEORGE C. BURTON.....	El Dorado
Sixth District	JOHN P. WOOD.....	Mena
	KARLTON H. KEMP.....	Texarkana
Seventh District	MARTIN EISELE.....	Hot Springs
	J. W. KENNEDY.....	Arkadelphia
Eighth District	ROBERT D. JONES.....	Little Rock
	BILL DAVE STEWART.....	Little Rock
Ninth District	ROSS FOWLER.....	Harrison
	STANLEY APPEGATE.....	Springdale
Tenth District	L. A. WHITTAKER.....	Fort Smith
	C. C. LONG.....	Ozark

The Advertising policy of this JOURNAL is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

EXCLUSIVE PUBLICATION — Articles are accepted for publication on the condition that they are contributed solely to this JOURNAL.

COPYRIGHT 1961—By The JOURNAL of the Arkansas Medical Society.

NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to the membership.

● SCIENTIFIC ARTICLES

Osteoarthritis of the Hip45
Harry D. Morris, M.D.

Primary Myelofibrosis49
M. C. Gephardt, M.D.
Thomas J. Hanlon, M.D.

The Use of the Vein Graft
Technique for Closure of
Tympanic Membrane
Perforations53
H. A. Ted Bailey, Jr., M.D.
Frederick N. Martin, M.A.

● WHAT'S NEW

What's New in Dermatology
Griseofulvin56
G. Thomas Jansen, M.D.
Calvin J. Dillaha, M.D.

● TEACHING SEMINAR

Staphylococcic Pneumonia ...59
Eleanor P. Deed, M.D.

● FEATURES

What is Your Diagnosis64
Public Health at a Glance65

Editorial
Open Heart Surgery67
Sam J. Kuykendall, M.D.
M.Sc., F.A.C.S.

Medicine in the News69

Announcements73

Obituary74

Personal and News Items74

Proceedings of Societies76

New Members76

Woman's Auxiliary77

Book Reviews78

Letters to the Editor78

Notice on Form 3579-P to be sent to Arkansas Medical Society, 218 Kelley Building, Fort Smith, Arkansas. Published monthly under direction of the Council, Arkansas Medical Society, Vol. 58, No. 2. Subscriptions \$3.00 a year. Single copies 50 cents. Entered as a second class matter, May 1, 1955, at the post office at Little Rock, Arkansas, under the Act of Congress of March, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 1, 1918. Second-class postage paid at Little Rock, Arkansas.

The JOURNAL

OF THE ARKANSAS MEDICAL SOCIETY

PUBLISHED MONTHLY UNDER DIRECTION OF THE COUNCIL

Volume 58

JULY, 1961

Number 2

Osteoarthritis of the Hip^{*}

HARRY D. MORRIS, M.D.^{**}

Osteoarthritis, known as degenerative arthritis, or involving the hip joints, as *malum coxae senilis*, represents a rapidly increasing segment of current orthopedic practice. This is due undoubtedly to the increase in life expectancy and the admirable attempts of the entire medical profession to increase the usefulness and decrease the suffering of our senior citizens.

ETIOLOGY

Osteoarthritis of the hip results from congenital or acquired deformities in childhood or adolescence, such as congenital coxa vara or congenital dislocation or subluxation of the hip with associated dysplasia of the acetabulum, and from those due to adolescent epiphyseal disturbances, such as coxa plana or slipping of the upper femoral epiphysis. Among other predisposing causes are acute pyogenic infections of the joint or complications of infectious diseases of childhood leading to later painful degenerative articular changes. Trauma during adult life, such as dislocation of the hip with or without fracture of the acetabulum, and intercapsular fractures of the femoral neck leading to aseptic necrosis of the femoral head, account for many of the osteoarthritic hips seen in adults. And lastly, the daily stresses constantly imposed on a major weight-bearing joint, particularly if the patient is overweight, are frequent causes of deterioration of the hip joint.

PATHOLOGY

In the early stage the femoral head shows subchondral cysts while some marginal sclerosis and diminution of the articular space. Later proliferation of new bone about the femoral head and margin of the acetabulum results in marginal exostosis. The cartilage becomes irregular and worn away over the head, and sclerosis is present in the head and adjacent acetabulum. Finally, severe deformity becomes evident, principally as a result of mushrooming of the head over the neck of the bone, and outward subluxation of the head may be present.

CLINICAL CHANGES

The principal early complaints are pain chiefly on motion, relieved by rest, and increased stiffness of the hip. Pain may extend down the thigh to the knee. Muscle spasm gradually develops and the hip characteristically assumes a position of external rotation, flexion and adduction. Movement of the hip joint is restricted, particularly in internal rotation, and pain and limping become progressively worse. As flexion and adduction increase, the patient assumes a characteristic gait because he must swing the body to the opposite side in order to clear the adducted hip from the floor in walking. As a result the patient may have to use a cane or crutch for relief of the pain of weight bearing if he is to remain ambulatory.

TREATMENT

Treatment is preventive, conservative or operative.

^{*}Presented at the meeting of the Arkansas State Medical Society, April 18, 1960 in Pine Bluff, Ark.

^{**}From the Department of Orthopedics, Ochsner Clinic, New Orleans.

Preventive Measures.

Ghormley (1) enumerated the principal factors that he believed would be effective in reducing the incidence of degenerative disease of the hip. The first is better control of acute infections of the hip in infancy and childhood as the result of the availability of chemotherapeutic and antibiotic agents. The second is improved care of these patients because of early recognition and more satisfactory treatment. The same applies to the acquired epiphyseal conditions of adolescence, such as slipped femoral epiphyses; if they can be recognized and treated before the slipping becomes severe, a practically normal hip can be maintained. Thirdly, better initial care of traumatic lesions, particularly traumatic dislocations of the hip and acute fractures of the head of the femur and acetabulum, would certainly be effective prophylaxis against degenerative changes in later life resulting from the ravages of traumatic arthritis initiated by these traumatic episodes.

Conservative Measures.

The most important consideration, in determining whether conservative or operative treatment is indicated in an individual case, is pain. The old adage "Don't throw away the cane," which was recently re-emphasized by Dr. Wally Blount in his Presidential Address before the American Academy of Orthopedic Surgeons, is particularly appropriate in many instances, since use of mild support, weight reduction and simple physical therapy can often bring about remarkable improvement. Older patients will often settle for relief of pain by conservative means, being willing to use a cane or crutch indefinitely. Younger persons with unstable, painful hips, if treated conservatively, will be forced to pursue a sedentary occupation and are frequently unhappy in this role. The ability of the orthopedic surgeon to judge the amount of pain and the ability of the patient to adjust to disability are probably the greatest factors in determining whether conservative or operative measures are required.

In the early stages of the disease much benefit can be obtained by limitation of activity, weight reduction, frequent rest

periods, use of recumbency with traction to overcome early deformities, use of cane or crutches or complete bed rest during an acute exacerbation, and generous use of aspirin. Heat, massage and exercises are of secondary importance. Occasionally, a lumbosacral corset will help improve the posture and hold the head of the femur snugly against an uninvolved portion of the acetabulum.

Injection of procaine into the obturator nerve and the posterior sensory supply to the capsule of the hip joint has resulted in only transient relief of pain. Injection of hydrocortone (R) directly into the hip joint has met with variable results. The hip joint is deep and difficult to inject. We have been disappointed with the results obtained by injection of hydrocortone, and rarely attempt it any more. Most competent radiologists have discarded roentgenotherapy.

Operative Measures.

The principal indications for operative treatment are increasing severity of deformity and intolerable pain. Denervation of the hip joint, popularized by Obletz and associates (2), has proved unreliable in our experience. The other surgical possibilities are 1) arthrodesis, 2) osteotomy, and 3) arthroplasty.

In our experience, the surest way of relieving pain, which is the primary reason for surgical intervention in a patient with unilateral osteoarthritic involvement, is *arthrodesis*. In a patient 40 years of age or younger, with unilateral involvement, this is the procedure of choice, since it results in a stable, strong, painless lower extremity. This will enable the patient to live the remainder of his life subject only to the restraints imposed by a stiff hip, which can be readily overcome if the range of motion in the knee is normal or nearly normal. If movement of the knee on the same side as the hip is greatly restricted, arthrodesis should be advised only under the most unusual circumstances, as the patient will be disappointed with his inability to get about actively after the operation. In patients older than 40 years, with unilateral involvement, we have not hesitated to perform arthrodesis. We have many patients between the ages of 40 and

60 years on whom arthrodesis was performed principally because they wanted to be assured that with one operation they would have a reasonable chance of permanent relief from the pain which was their primary purpose in seeking treatment. Arthrodesis has the disadvantage of placing some additional strain upon the lumbosacral joint. We have been particularly careful in evaluating low back complaints among our own patients with arthrodeses, and, in our hands, even in the presence of considerable osteoarthritic changes of the lumbar spine, low back pain has not been a troublesome complication.

Most of the standard operative technics for securing arthrodesis of the adult hip include removal of the articular cartilage from the head and acetabulum, internal fixation with some metallic device, usually a Smith-Petersen nail driven through the head and neck into the thick portion of the acetabulum, or use of heavily threaded multiple pins in the same manner, and use of additional autogenous bone usually from the ilium, to encourage fusion. The accepted ideal position for arthrodesis is approximately 30 degrees of flexion, not more than 5 degrees of abduction and slight external rotation. A plaster hip spica is required for eight to twelve weeks postoperatively, and usually at least six months must elapse before fusion is sufficiently firm for the patient to discard his crutches and proceed with unrestricted, unsupported weight bearing. This long convalescence is, of course, an additional disadvantage of this procedure.

Osteotomy. Intertrochanteric or displacement osteotomy, popularly known as the McMurray osteotomy, as originally performed, consisted of osteotomy of the femur sloped upward and inward at an angle of about 40 degrees, terminating just above the lesser trochanter. The lower fragment was displaced inward so that its inner point lay below the acetabulum, which restricted adduction. The rationale of this procedure and the reason why so often osteotomies result in relief of pain, apparently for many years, has not been satisfactorily explained. It has been suggested that the head of the femur gradually rotates to the position in which the capsule is most relaxed, so that tension is

relieved. However, success also follows internal fixation of the osteotomy when gradual rotation is prevented. Again, it has been explained that the changed position of the femoral head realigns the stresses within the bone, but then the pain should return when the bone has become adapted to the changed conditions. The inner angle of the lower fragment abuts against the acetabulum and prevents adduction, but relief often follows osteotomy with little or no displacement. Lastly, interruption of the medullary blood supply to the head of the femur arrests or retards progress of the arthritis. All of this has been pointed out most admirably by Wiles (3), who believed that, whatever the explanation, it can be shown that at least one-half the patients are relieved of nearly all their pain after osteotomy, one-third much of their pain, and the remainder are apparently made no worse. By use of internal fixation at the time of osteotomy, frequently these patients can be allowed to convalesce without use of a plaster cast, and because of this relatively simple technic and shortened period of after-care, this procedure is becoming increasingly more popular with American orthopedists, particularly since they have viewed the success of their British contemporaries with this rather irrational but nonetheless pain-relieving operation.

Arthroplasty has the advantage of preserving or increasing motion. However, patients must be carefully selected. A definite indication is bilateral disease, especially if motion has been obliterated or almost obliterated, since it is most desirable to secure a moving hip at least on one side. Strength of musculature about the joint to move the hip under weight bearing is necessary for a successful result. In addition, the patient must be willing to cooperate in a long program of exercise to restore atrophic muscles to their normal capacity, and particularly overweight individuals must be willing to demonstrate a genuine desire to improve their condition by losing weight before the operation is attempted.

There are two methods of arthroplasty in general use. The mold arthroplasty, using a vitallium cup, was originated by Smith-Petersen (4) in 1939 and requires

a high degree of technical skill on the part of the operator to reshape the head and acetabulum. The replacement type of arthroplasty in which the head of the femur is resected has been in use only for approximately eight years. The original acrylic replacement head of Judet and Judet (5) was of the stem type. This was later replaced by a metallic stem type head after failure of the plastic material. The stem type is now rarely used but in its place is the intramedullary type of replacement prosthesis of which the Fred Thompson and Austin Moore products are most popular, these give a much better purchase in the remaining femoral shaft than have any other of the previous types of replacements.

Arthroplasty of any type has the disadvantage of occasional failure due to instability and uncertain relief of pain. In the younger age group, the mold type arthroplasty preserves stock, and if the procedure fails, enough of the head and neck still remains to perform arthrodesis with not too much difficulty. The replacement type is preferred for the elderly patient, since the expectancy of life is probably not any greater than the expectancy of satisfactory performance of his prosthetic device. Comparison of the results of the various operations for osteoarthritis of the hip is shown in table 1 prepared by Wiles (3). In bilateral involvement, particularly if the pain is sufficient to warrant consideration of operation on both

hips, we have performed arthrodesis on one side and vitallium cup arthroplasty on the opposite side, giving the patient one stable painless hip and one movable hip. This has been found to be a reasonably satisfactory solution to a difficult situation.

In conclusion, then, the surgeon's ability to evaluate the patient's complaints as well as to estimate the patient's willingness to accept certain restrictions in activity is of paramount importance in abandoning conservative treatment. It is impossible to treat all patients with osteoarthritis of the hip by a single surgical procedure, since the ultimate choice of operation depends upon, first, the age of the patient, whether involvement is bilateral or unilateral, the mobility of the hip, and the basic temperament and occupation of the patient. It is to the best interest of the patient for the orthopedic surgeon to individualize the operation to fit the particular case.

References

1. Ghormley, R. K.: The painful hip in the adult. Proc. Staff Meet., Mayo Clin. 29:56, 1954.
2. Oblatz, B. E. et al.: Early effects of partial sensory denervation of the hip for relief of pain in chronic arthritis. J. Bone & Joint Surg. 31A:805, 1949.
3. Wiles, P.: The surgery of osteoarthritic hip. Brit. J. Surg. 45:488, 1958.
4. Smith-Petersen, M. N.: Arthroplasty of the hip; a new method. J. Bone & Joint Surg. 21: 269, 1939.
5. Judet, J. and Judet, R.: The use of an artificial femoral head for arthroplasty of the hip joint. J. Bone & Joint Surg. 32B:166, 1950.

Table I
RESULTS OF OPERATIONS FOR OSTEOARTHRITIS OF HIP
(Courtesy of Wiles (3))

	Mold Arthroplasty	Osteotomy	Arthrodesis
Pain	Relieved in one-half, reduced in one-fourth	Relieved in one-half, reduced in one-third	Relieved in all
Deformity	Usually corrected	Often corrected	Usually corrected
Stiffness	Reduced in most	Unchanged in most	Increased in all
Function: Walking Static	Good in one-sixth fair in one-half Good in one-half fair in one-fourth	Improved in those with reduced pain	Usually good Much impaired
Durability	Uncertain, perhaps 5 to 10 years	Apparently permanent	Permanent
Strain on Spine	Unchanged or reduced	Unchanged	Increased

PRIMARY MYELOFIBROSIS

(Normocytic myelophthisic anemia)

Review and Case Presentation

M. C. GEPHARDT, M.D. AND THOMAS J. HANLON, M.D.

Primary myelofibrosis is uncommon and often difficult to recognize early. A recent experience with this condition in a man who dies of the disease at the age of 63 years stimulated this review of the subject.

HISTORICAL

Prior to 1939 it had been recognized that bone marrow underwent changes which impaired its ability to carry out its normal hemopoietic and myelopoietic functions. In certain instances tuberculosis, metastatic carcinoma and leukemia (1, 2) have been shown to produce bone marrow changes which result in an impairment of normal blood element production. It was recognized early that there were instances in which there was no such explanation (3).

In 1939 Huggins and Wiege (4) interrupted the principal nutrient arterial and venous circulation to long bones in experimental animals to produce bone marrow necrosis with no inflammatory exudate. To their surprise, repair would be in evidence in four days and completely accomplished within seventy days with an absence of scarring. They concluded that the problem of myelofibrosis was not that of impaired nutrition or circulation to the bone marrow. Erf and Herbert (5) in 1944 concluded from their studies that myelofibrosis could occur as a focalized or generalized condition, either primary or secondary. They felt that the etiology was still unknown, but might have some relationship to chronic fever or hormones. They administered testosterone with some remission in symptoms in three of four cases or primary generalized myelofibrosis. In their opinion myelofibrosis was unlike aplastic anemia by having a fibrotic marrow and extramedullary hematopoiesis. Crail, Alt and Nadler (6) in 1948 made a detailed comparison between idiopathic primary myelofibrosis and that

due to tuberculosis. The idiopathic myelofibrosis differed from the tuberculous form in these respects: (a) no fever; (b) greater splenomegaly; (c) less lymphadenopathy; (d) greater leukomoid reaction; (e) erythrocyte survival time usually longer; (f) less or no fibrosis of other organs; and (g) occurrence in older age group. In both there was: (a) weight loss; (b) hepatomegaly; (c) anemia; (d) reduced thrombocytes; and (e) sternal marrow with hypoplasia, megakaryocytes and fibrosis. Clinical and laboratory descriptions of myelofibrosis studies by Cook, et al (7), Korst, et al (8), and Medoff and Stickney (9) since then have been in general agreement. Taylor and Simpson (10) in 1950 emphasized that often aleukemic myelosis as well as neoplasms or chemical toxins could produce bone marrow fibrosis. Also in 1950 Wyatt and Sommers (11) reported a study of thirty cases with chronic bone marrow failure, twenty of whom were subjected to autopsy. In their opinion necrobiosis of material in hemopoietic cells was often followed by overgrowth of marrow reticulum and ossification. Frequently immature erythrocytes and leukocytes appeared in the peripheral circulation with development of extramedullary hematopoiesis. Their classification of causes was: (1) exogenous toxic material; (2) liver dysfunction; (3) endocrine abnormalities; (4) chronic blood loss or destruction; and (5) cardiovascular disease.

In an excellent presentation of the findings in ten patients with primary proliferative marrow disorders (chronic myeloid leukemia, myelofibrosis, polycythemia vera and megakaryocytic myelosis) Hutt, et al (12), believed that the findings indicated these are similar and related processes and are examples of proliferative or neoplastic process of multipotential primitive mesenchymal cells. They also proposed that the splenic enlargement

in myelofibrosis is a manifestation of the fundamental proliferative process and not compensatory for reduced marrow hematopoiesis. Using a technique that would evaluate inadequate production and increased destruction of red blood cells in a given anemia, Loeb, et al (13), interpreted their results as showing that the anemia in chronic bone marrow failure was due to decreased red blood cell production and at times may have some associated hemolytic component. ACTH was effective in stimulating some erythropoiesis. It was their feeling that the anemia of chronic bone marrow failure should not always be considered refractory to therapy. Those that seemed to respond to ACTH were felt to be approachable by splenectomy. The average duration of disease from the onset of this illness was 10.8 years in their review.

Management of this illness has been uncertain because of a lack of clearly defined etiology. When this condition was first recognized, it was felt that the splenomegaly and hepatomegaly were attempts to compensate for bone marrow deficiency. For that reason it was felt that splenectomy was contraindicated. A report of 27 splenectomies for increased and immature leukemic cells in the blood stream by Hickling, et al (14), was suggestive enough that the subject has been reviewed again in an attempt to identify those cases in which this would be a suitable approach. It had been noted that the use of hormones would help to serve as a guide in the selection of those most likely to benefit from the removal of the spleen. Since 1950 two criteria have become accepted as justifying splenectomy: (1) relief of mechanical distress due to the large size of the spleen; and (2) demonstration of hemolysis, especially in cases in which hormone therapy produced some improvement. Some investigators have included hypersplenism in their criteria for surgery in this condition. At the present time the reports of cases in which the diagnosis has been adequately established show a survival time of three years in a few instances with considerable relief from their symptoms. Occasionally there is marked improvement in the blood picture.

CASE REPORT

Our patient was a veteran of WWI who began to notice weakness and shortness of breath in March, 1956. There had been no gastric complaints, neuritis, stomatitis, glossitis, or blood loss by epistaxis, melena, hematemesis or hemoptysis. Bone marrow specimens taken and studied elsewhere established the diagnosis as myelofibrosis with pancytopenia.

When he was first seen in this hospital in October, 1956 his physical findings were within normal limits except for pallor of the skin and mucous membranes. The erythrocyte count was 3,100,000; hemoglobin 14.4 grams and hematocrit 31. The leukocyte count was 2,400 with polys 45 percent, lymphocytes 28 percent and monocytes 27 percent. The platelet count was 37,200. The corrected sedimentation rate was 28 mm. per hour. Free hydrochloric acid was found on gastric analysis. Roentgen evaluation showed an enlarged spleen, a duodenal diverticulum, small diverticula of the colon and linear atelectasis in the chest at the left base. It was postulated that the splenomegaly was probably due to myeloid metaplasia. At that time the man received blood transfusions with considerable clinical improvement. His discharge hemogram showed 3,100,000 erythrocytes.

On his next admission in December, 1956 approximately two weeks later, his hemogram showed a drop to an erythrocyte count of 2,000,000; hemoglobin 5.6 grams; hematocrit 13; sedimentation rate 6 mm. and leukocyte count of 3,200 (neutrophils 32 percent, lymphocytes 38 percent and monocytes 20 percent). No notation was made regarding abnormal cells. The spleen was enlarged extending downward to the level of the umbilicus and it was not tender. The remainder of the findings showed no significant change. He received fourteen blood transfusions and was discharged 38 days after this admission.

Two weeks later on January 18, 1957 his blood count had again dropped to a low level with hemoglobin 3.7 grams and hematocrit 10. Leukocyte count still remained low with increasing shift to lymphocyte resembling cells. A prominent symptom during this period of hospitali-

zation was episodes of epistaxis. During the next two months he was admitted twice for additional blood transfusions without history or evidence of recurrence of bleeding.

About five months after the original admission a swelling in the neck appeared below the right jaw and gradually increased in size (Fig. 1). There was no

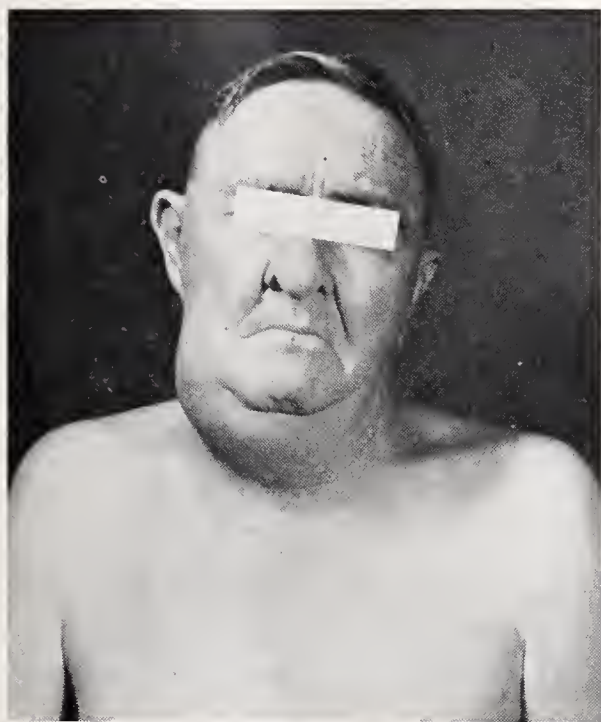


Figure 1
Submaxillary Abscess.

fever, dysphagia, dyspnea, pain or distress. The mass was approximately three inches in its greatest diameter, quite firm without tenderness. Sialograms showed no evidence of calculi in the submaxillary gland. The mass proved to be an abscess and appropriate antibiotics and transfusions were given. At the time of discharge there was still swelling but no drainage.

The final admission occurred about eight months after our first examination. Terminally he developed an area of pneumonitis and atelectasis which failed to respond to supportive measures and antibiotics. He continued an unfavorable course and expired nearly ten months after our original observations (seventeen months after his first symptoms). During this period he received seventy pints of whole blood in an attempt to maintain an adequate erythrocyte level.

At autopsy the major findings were car-

diac enlargement with left ventricular hypertrophy, splenomegaly with weight of 1480 grams, hepatomegaly with weight of 2850 grams. The coronary vessels were moderately atherosclerotic with calcification. Lung findings were of a neutropenic pneumonitis. The spleen (Fig. 2) showed

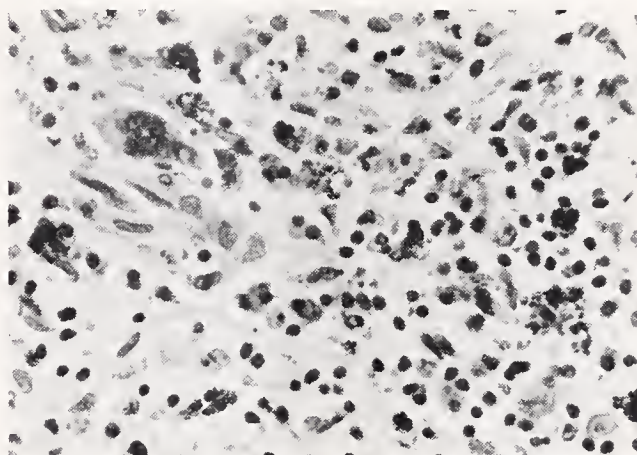


Figure 2

Spleen—showing extramedullary hematopoiesis. Note the megakaryocytes. Some transfusion hemosiderosis is present.

a marked obliteration of its architecture with only occasional areas of hypercellular red pulp, numerous hemosiderin laden phagocytes, and with scattered areas of erythropoiesis and myelopoiesis. There were scattered megakaryocytes in the red pulp with focal fibrosis of the intersinusoidal connective tissue. There was preservation of the lobular architecture of the liver. Kupffer's cells were laden with hemosiderin pigments. A large amount of hemosiderin was also noted in the other liver cell structures, but none was noted in the bile duct epithelium. This was interpreted as exogenous hemosiderosis. Lymph nodes showed a prominent hemosiderosis with focal areas of erythropoiesis and myelopoiesis and megakaryocytes. Bone marrow (Fig. 3) examination showed hypocellularity, increase in the connective tissue and some increase in trabeculae of spongy bone. In no areas was the marrow completely normal, but a few areas were nearly normal. Only a few foci of normoblasts and myelocytes were seen with decrease in megakaryocytes. The impression was that of a myelofibrosis and osteopetrosis. Slight hemosiderosis was noted in the bony structures. A hydronephrosis of one kidney was

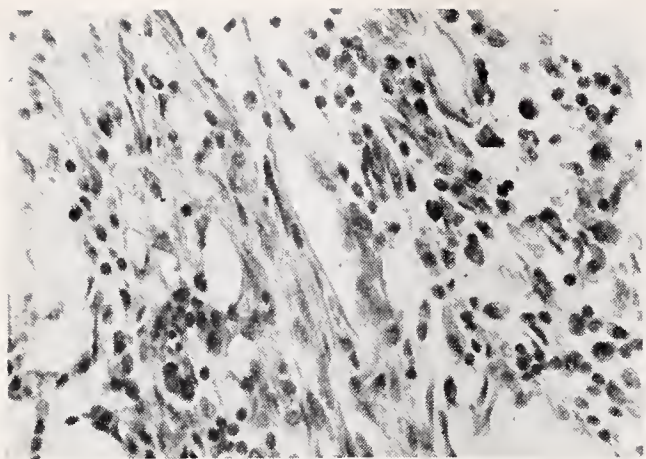


Figure 3

Bone marrow showing fibrosis with some residual hematopoietic and adipose tissue.

considered to be due to bleeding with clot obstructing the ureter.

DISCUSSION

In the management of this case the question of splenectomy presented itself rather early; however, the difficulties in controlling his anemia and inadequate control of the various infections discouraged going through with a splenectomy. The other features of his illness were managed in a symptomatic manner.

SUMMARY

1. A case of primary myelofibrosis is presented which was apparently recognized early in the course of his illness.

2. Supportive care used in his management is outlined.

3. A more basic understanding of this problem is needed before more effective treatment can be offered.

References

1. Lucey, H. C., "Leuco-erythroblastic Anemia resembling Acholuric Jaundice"; *Lancet*: 237:77 (1939).
2. Boyd, William: *Pathology for the Physician*, Ed. 6, P 619, Phila. 1958.
3. Jackson, H. Jr., Parker, F. Jr., & Lemon, H. M., "Agnogenic Myeloid Metaplasia of the Spleen"; *New England Journal of Medicine*: 222:985 (1940); *Science*: 93:541 (1941).
4. Huggins, C., & Wiege, E., "Effect on Bone Marrow of Disruption of Nutrient Artery and Vein"; *Ann. Surg.*: 110:940 (1939).
5. Erf, L. A. & Herbert, P. A., "Primary and Secondary Myelofibrosis"; *Ann. Int. Med.*: 21:863 (1944).
6. Crail, H. W., Alt, H. L., & Nadler, W. H., "Myelofibrosis Associated with Tuberculosis"; *Blood*: 3:1426 (1948).
7. Cook, J. E., Franklin, J. W., Hamilton, H. E., & Fowler, W. M., "Syndrome of Myelofibrosis"; *Arch. Int. Med.*: 91:704 (1953).
8. Korst, R., Clatanoff, D. V., & Schilling, R. F., "On Myelofibrosis"; *Arch. Int. Med.*: 97:169 (1956).
9. Medoff, Alan S., & Stickney, J. M., "Primary Myelofibrosis with Myeloid Metaplasia"; *Medical Clinics of North America*, July, 1956, PP 1125-1132.
10. Taylor, H. E., & Simpson, W. W., "Bone Marrow Fibrosis Developing in Aleukemic Myelosis"; *Blood*: 5:348-357 (1950).
11. Wyatt, J. P., & Sommers, S. C., "Chronic Marrow Failure, Myelosclerosis and Extramedullary Hematopoiesis"; *Blood*: 5:329-347 (1950).
12. Hutt, M. S. R., Pinniger, J. L., & Wetherly-Mein, G., "The Myeloproliferative Disorders"; *Blood*: 8:295 (1953).
13. Loeb, Virgil Jr., Moore, C. V., & Dubach, Reuben, "Physiologic Evaluation and Management of Chronic Bone Marrow Failure"; *Am. J. Med.*: 15:499-517 (Oct. 1953).
14. Hickling, R. A., "Chronic Non-leukemic Myelosis"; *Quart. Journ. Med.*: 6:253 (1947); *Brit. Med. Journ.*: 2:411 (1953).
15. Carpenter, C., & Flory, C. M., "Chronic Non-leukemic Myelosis: Report of Case with Megakaryocytic Myeloid Splenomegaly, Leukoerythroblastic Anemia, Generalized Osteosclerosis and Myelofibrosis"; *Ann. Int. Med.*: 67:489-508 (1941).
16. Edwards, H. C., "Practice and Consequences of Splenectomy"; *Lancet*: 2:601-606 (1951).
17. Glaser, R. J. & Smith, D. E., "Myelofibrosis and Extramedullary Hematopoiesis (CPC)"; *Am. J. Med.*: 16:127-137.
18. Green, T. W., Conley, C. L., Ashburn, L. L., & Peters, H. R., "Splenectomy for Myeloid Metaplasia of the Spleen"; *New Eng. J. Med.*: 248:211 (1953).
19. Asher, R., "Polycythaemia, Myelofibrosis, Splenectomy, Myeloid Leukosis and Polycythaemia"; *Proc. Royal Soc. Medicine*: 48:539-540 (Jul. 1955).
20. Cartwright, G. E., Finch, C. A., Loef, V. Jr., Moore, C. V., Singer, K., & Damesheck, Wm.; (Panels in Therapy) "Splenectomy in Myeloid Metaplasia with Myelosclerosis"; *Blood*: 10:550-554 (1955).
21. Richmond, J., & Duncan, J. G., "Myelofibrosis and Myelosclerosis: A review of 13 cases with particular reference to treatment and to the diagnosis value of radiological examination"; *Scottish Medical Journal*: 1(11):337-349 (Nov. 1956).

The Use of the Vein Graft Technique for Closure of Tympanic Membrane Perforations*

H. A. TED BAILEY, JR., M.D.** AND FREDERICK N. MARTIN, M.A.***

An early report of closure of ear drum perforations by grafting was made in 1953 by Howard House (1) wherein he described four cases of ear drum perforations, three of which he had successfully closed by skin grafting. Zollner (2) and Wullstein (3) of Germany in 1955 and 1956, reporting independently of each other, described their successful use of skin grafting for drum perforations and other middle ear reconstructions in a large number of cases. The literature soon reflected the enthusiastic reception with which this technique was adopted, however, considerable controversy still exists regarding the site and the type and/or thickness of the skin grafts, indicating that none of the various types of skin grafts have adequately met the problem of closure of tympanic membrane perforations.

The chief objections to all the various forms of skin grafts have been: (1) inability to see how the skin graft is applied to the recipient area, (2) early failure of grafts to survive, (3) development of cholesteatomas and inclusion cysts, (4) continuous desquamation, (5) delayed sloughing of grafts which initially appeared successful and (6) poor likeness of the grafted area to a normal ear drum.

The dissatisfaction with skin grafting resulted in the introduction of the vein graft for closure of drum perforations by Shea in 1958 which he reported in 1960 (4). He had reported the use of the vein graft in middle ear surgery in 1958 (5) using vein tissue to cover the fenestra ovalis after total stapedectomy. At the same time he used a polyethylene strut from the incus down onto the newly applied vein graft as a replacement for the Stapes. The tremendous success of vein grafts to close the fenestra ovalis suggested to him

the possibility of using them to close drum perforations as well. Shea initially tried vein grafts simply to close occasional rents or tears in the drums which had occurred during stapes surgery. Their effectiveness here confirmed his conviction that vein would be satisfactory grafting material for drum perforations. He subsequently reported the use of veins for closure of drum perforations in June 1960.

The technique which Shea described for the use of vein grafts in closure of drum perforations was essentially as follows: A section of vein is taken from the patient's hand or arm of sufficient length to cover the perforation. It is trimmed of all fat and connective tissue and slit open to form a patch. The drum is then incised at the margin of the perforation all the way around and the mucosa is separated from the underlying surface of the drum for a distance of two millimeters away from the margin of the perforation. The vein is then set into position on top of the supporting gelfoam with the adventitia facing upwards. The margins of the vein are tucked under the drum and pulled gently up into contact with the exposed area of its fibrous layer, being held in this position by the underlying gelfoam. Several strips of the surface epithelial layer from the margin of the perforation are then pulled onto the exposed portion of the vein to act as runners to facilitate the graft being covered with an epithelial layer. He further suggested when possible to create a pocket between the mucosal and fibrous layers of the drum rather than trying to push away the mucosa, then fit the vein into this pocket. This is felt to facilitate nourishment for the graft and help to further secure the vein in proper position. I have used this technique on several cases but most of the time I have found the mucosa has not been thick enough to develop a pocket. Furthermore separating the mucosal layer necessitates working on the under surface of the drum where visibility is limited.

*Presented at the annual meeting of Ark. Med. Soc., Little Rock, April 17-19, 1961.

**Head, Division of Otolaryngology, Department of Surgery, University of Arkansas School of Medicine.

***Director, Audiology Department, Bailey Ear Clinic, 1610 West Third Street, Little Rock, Arkansas.

Since I have adopted the use of vein grafts for closure of drum perforations, I have noted very few early failures and no problems with desquamation, no cholesteatomas or inclusion cysts, and only one case of delayed sloughing of the graft. Furthermore, I have found there is easy visibility for direct application of the graft. Subsequent follow-up examinations have revealed a much more normal appearing and hearing drum largely due to the fact the vein acts as a replacement for the missing fibrous layer of the drum.

Since the fall of 1959, I have, with increasing frequency, treated drum perforations of various sizes by the use of vein grafts. Both initial and short term results have thus far been much superior to those acquired by skin grafting. Out of the forty-five cases treated with vein grafts, thirty-eight (84 percent) showed satisfactory closure. Of the seven cases which failed to survive, only two were seen in patients having drum perforations constituting 25 percent to 50 percent of the total drum area. Three were seen in cases having 50 percent to 75 percent involvement and two failures occurred where the perforations constituted over 75 percent of the drum.

It is my feeling that the very large drum perforations (over 75 percent) are still better handled by split thickness skin grafting. I have arrived at this conclusion primarily because of the difficulty in obtaining a vein large enough to close this size perforation (especially in children) and secondarily because of the greater dependence upon which a vein graft has on the peripheral blood supply, whereas with the use of skin, some blood supply can be obtained from the promontory. Austin (6) feels that the determining factor in the survival of the vein graft is the rapid epithelialization over the vein from the drum remnant or the skin of the canal wall because he feels this epithelial layer brings in the essential blood supply. In only two cases have I used vein grafts in which the size of the perforation was greater than 75 percent of the drum area. In both of these the vein failed to take, however, subsequent split thickness skin grafts were successful. The skin was taken from the inner aspect of the upper

arm and measured sixteen microns in thickness. When it is deemed necessary to gain further improvement in hearing following the use of a large split thickness skin graft, the center portion which is adhered to the promontory may be excised and closed by a vein graft which will not adhere to the promontory.

For my last eight cases, I have used the following technique: A small piece of cotton soaked in 2 percent Zylocain is placed through the perforation to render the middle ear mucosa insensitive to the prepping solutions consisting of Ether, Septisol and Zephiran. The operative procedure is carried out under local anesthesia, using one c.c. of a mixture of 2 percent Zylocain and 1:1,000 Adrenalin in a ratio of 5:1. This is injected around the circumference of the ear canal just inside the opening. Surgery is then performed through the Zeiss operating microscope working at ten power magnification using a standard ear speculum held in position by a speculum holder. A tiny suction is held in one hand and a special drum knife in the other. (1) The initial incision is made around the margin of the drum perforation being sure to cut on the under edge. This promotes elevation of any epithelium which has grown over and under the margin of the perforation. (2) The epithelial layer is then lifted up and over the edge of the perforation. The epithelial layer can then be easily elevated for a distance of three millimeters all the way around the perforation creating a pocket between the epithelial and fibrous layers. Should the perforation be marginal, the skin of the canal is gently elevated in a retrograde fashion from the margin of the exposed annulus for insertion of the edge of the vein between the skin and bony canal wall. Naturally in both central and marginal perforations every necessary precaution must be taken to prevent any epithelium from being left in the middle ear space before closure by grafting. (3) This having been done, small diced pieces of gelfoam mixed with the patient's own blood are placed through the perforation into the middle ear space. At this time the vein is secured from the hand or arm in the usual manner. The fat and connective tissue are trimmed away, the vein slit open, the edges rounded

off, and with the adventitial side up the vein is placed into the ear. (4) The edges of the vein are tucked under the freed layer of epithelium. This is accomplished by using a right angle hook in one hand to lift up the epithelial margin and with the other hand another right angle hook is used to tuck the edges of the vein into the newly created space. Some of the epithelium near the margin of the perforation is then pulled into strands creating the previously described runners to speed up the epithelialization and consequently its blood supply. The vein graft is then covered with formed drops of gelfoam soaked in Cortisporin Otic Solution and the entire canal filled with this gelfoam. A cotton plug is placed at the mouth of the ear canal and a routine head dressing is applied.

The patient is kept in bed for twenty-four hours with his head to one side keeping the operated ear up. At the end of this time, the head dressing is removed, the patient is allowed to be up and around and discharged at noon. Before the patient leaves the hospital he is directed to carry out the following instructions for a period of three weeks: (1) get no water in the operated ear, (2) if sneezing is necessary, have it come out of the mouth, (3) do not blow the nose, (4) do not travel by air. The patient is further directed to contact our office if he develops fever or has pain or discharge from the operated ear. No analgesics or antibiotics are prescribed except in selected cases.

If, upon the patient's first post-operative visit, the vein is noted to have moved so that some of the perforation is not covered, I feel it is advisable to leave this alone as most likely the resulting gap will spontaneously close. The graft first ap-

pears whitish or even yellow but this turns to a pink color in four to six weeks. By the end of four to six months the margin of the graft ordinarily can no longer be distinguished from the remainder of the drum.

The ear is first checked on the tenth post-operative day at which time the external canal is cleansed of all remaining gelfoam and the graft inspected. As a rule the patient's hearing is improved and he has experienced no post-operative pain or discomfort at any time following discharge from the hospital.

All of the cases upon whom this report is based had dry ears with no evidence of other middle ear pathology. These patients had careful pre-operative audiometric examinations with pure tone and speech audiometry and were re-examined after application of a paper patch over the perforation to indicate the approximate amount of gain to be anticipated. Based on the results of postoperative hearing testing along with the patients' own subjective impressions, it is our opinion that vein grafted drums yield sharper and more normal hearing than is produced by skin grafted drums.

Bibliography

1. House, H. P.: Surgical Repair of the Perforated Ear Drum. *Ann. Otol. Rhinol. and Laryngol.* 62:1072-1082, Dec., 1953.
2. Zollner, F.: The Principles of Plastic Surgery of the Sound Conducting Apparatus. *Jour. Laryng. and Otol.* 69:637, October, 1955.
3. Wullstein, H.: Theory and Practice of Tympanoplasty. *The Laryngoscope* 66:1076-1093, August, 1956.
4. Shea, J. J., Jr.: Vein Graft Closure of the Drum Perforations. *Northwest Med.*, June, 1960.
5. Shea, J. J., Jr.: Fenestration of Oval Window. *Ann. Otol. Rhinol. and Laryng.*, 67:932-951, Dec., 1958.
6. Austin, D. F.: Personal Communication, March, 1961.

◆ What's NEW ◆

What's New in Dermatology Griseofulvin

G. THOMAS JANSEN, M.D. AND CALVIN J. DILLAHA, M.D.*

Without question the greatest new development in dermatology has been the introduction of griseofulvin, a systemically administered antibiotic to combat superficial infections of the skin due to fungi. A testimonial to the importance of this development was the publication of the May, 1960, Archives of Dermatology, devoted exclusively to the proceedings of a symposium on griseofulvin and the dermatomycoses held in October, 1959, at Miami, Florida. The original enthusiasm concerning the effectiveness of griseofulvin has been partially tempered by time and experience. The indications for this drug, as well as the effect one might expect from its administration seems clearly delineated at present. In addition, remarkably few toxic reactions have been attributed to griseofulvin.

It is probably well to reiterate that not all superficial fungus infections respond to this agent. Both tinea versicolor and *Candida albicans* infections (moniliasis) are not improved by its systemic administration. In addition to its erroneous use in these diseases, the next greatest problem is the widespread prescribing of the drug for skin conditions, especially those of the feet and hands, that are mistakenly called a fungus infection. Many people with chronic eczematous eruptions involving the hands, feet and nails not caused by a superficial fungus are receiving griseofulvin for long periods of time in vain. The need for prolonged administration and the semi-precious cost of griseofulvin underscore the necessity for an accurate diagnosis of the infection before the drug is administered. In most instances, laboratory procedures such as the

direct potassium hydroxide preparation of collected scale and fungus cultures must be done before treatment can be ordered. As the therapeutic specificity for a disease increases, the need for more accurate diagnosis increases in a like ratio.

After the diagnosis has been established, the following treatment schedules are generally effective.

SCALP INFECTIONS

Ringworm infection of the scalp responds more quickly and the percentage of cure is greater, than in any of the other superficial fungus infections. The salutary effect in this infection alone is enough to justify the great enthusiasm surrounding the introduction of griseofulvin. Any agent that abrogated the need for x-ray epilation of the infected scalp is welcome indeed! The administration of 1/2 to 1 gram of griseofulvin daily, depending upon the size of the child, for a period of three or four weeks is curative in most instances. In cases of epidemic ringworm of the scalp, it has been found that a single 3 gram dose of griseofulvin is curative in 80 percent of the patients so treated. It is no longer necessary to shave the head of children with ringworm infection of the scalp during this treatment program. However, following termination of the treatment, it is well to reexamine the child carefully to insure that all infected portions of the hair have been removed. If the infection is of a fluorescent type, examination under a Wood light will detect any remaining infected hair. Since the antibiotic is fungistatic and merely prevents the fungus from

*Waldon Bldg. Little Rock, Arkansas

growing into the hair shaft, a sharp line of demarcation is seen between the fluorescent infected hair and nonfluorescent normal hair growth which has occurred since the inauguration of treatment. Therefore, it is simple to cut off the hair proximal to the resistant barrier formed by the griseofulvin deposited in the hair.

HANDS, FEET AND NAILS

Persistent fungus infections of the nails on the hands and feet especially those due to *Trichophyton rubrum* infection have long been considered to be incurable by most dermatologists. Long-standing deformity of the nails with subsequent destruction and discoloration can be a severe cosmetic disability. Again, it was apparent that griseofulvin is a more effective therapeutic agent than any previously developed. Unfortunately, some unrelated skin diseases such as psoriasis can produce comparable nail changes. Direct examination and culture are paramount to the intelligent use of this agent for nail disease. The effect of griseofulvin seems predicated on the fact that keratinizing structures of the body are sites of predilection for the deposition of the orally ingested drug. Since nail growth is slow, especially on the feet, it was logical to assume that the treatment schedule would have to be long for any agent that was fungistatic rather than fungicidal. This has proved to be true. *Ordinarily, 1 gram of griseofulvin must be given daily for a minimum of three to six months to effectively treat fingernail infections.* Even then, some relapses are to be expected. In toenail infections the response is more discouraging and a minimum of treatment for a period of seven or eight months must be expected. Such prolonged therapy is hardly justified in most patients. Frequently, all nails except one will respond to treatment and in spite of continuing treatment, this stubborn nail will fail to respond.

Just as the diagnosis of fungus infection of the nails can be confused with other conditions that produce similar discoloration or deformity, chronic eczematous scaling patches on the hands and feet pose a problem of differential diagnosis. As mentioned previously, the importance

of proper diagnostic techniques including direct examination of the scale and subsequent culture cannot be overemphasized as a requisite in treating these areas. Again, the most common infecting fungus is *Trichophyton rubrum* and many of the statements made concerning the dosage requirements of nail infections can be repeated here. A gram a day continued for one to several months is required. Unfortunately, infections of the feet particularly those between the third, fourth and fifth toes are most resistant and it is disappointing to see positive isolations of the infection on direct examination and culture at the termination of treatment. The incorporation of appropriate topical treatment particularly those with keratolytic agents during the course of oral therapy is helpful and in order. One may have to satisfy himself with clinical improvement of these infections without a cure. However, griseofulvin can be most helpful during the warm summer months at which time some patients have not been able to find effective relief, prior to the introduction of this antibiotic.

TRUNK AND INGUINAL INFECTIONS

Fungus infections in these areas usually respond promptly to treatment to the same dosage schedule of one gram a day. The relapse rate is lower than instances of infection involving the hands, feet or toenails. In general, a patient will note gratifying relief of symptoms within three to ten days. However, the drug should be continued for about one month. Although topical agents may be helpful adjuncts to systemic treatment, it should be noted that the stronger antifungal preparation frequently produce more irritation and maceration in the inguinal area than the benefit from their use warrants. It perhaps is better to use mild astringent compresses or drying powders during the acute phase of the infection in the groin than a stronger antifungal agent.

TOXICITY

Since almost all of the outlined treatment schedules require weeks to months of administration of griseofulvin, the problem of toxicity to this treatment becomes important. Hitherto, experience in-

dicates that the drug is remarkably free from side effects. Blood dyscrasias have not been reported. Originally, cross reactions in patients allergic to penicillin were feared, but in reality they have occurred only infrequently. A few examples of urticarial reaction have been reported. Some patients have complained of gastro-intestinal discomfort, nervousness, insomnia and a necessity to concentrate for motor actions previously done by habit, such as, driving a car or flying an airplane. In addition, a few investigators have ob-

served, maculopapular, hemorrhagic or vesicular eruptions.

CONCLUSION

Griseofulvin is a milestone in our search for the perfect antifungal agent. Ringworm infections of the beard or scalp can easily be cured by its oral administration. Although the remaining dermatomycoses (excluding tinea versicolor and moniliasis), respond to therapy, the incidence of cure is not so promising. Toenail and pedal infections in particular, tend to relapse after apparent clearing has occurred.

A TEACHING SEMINAR
FROM THE
UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE

STAPHYLOCOCCIC PNEUMONIA

With Emphasis on the Roentgenologic Appearance

ELEANOR P. DEED, M.D.*

Staphylococcic pneumonia, as a distinct entity, was first described by Chickering and Park (3) in 1919 in association with an influenza epidemic in an army camp. They were impressed by the extreme virulence of the disease. Of 312 fatal cases of influenza in which post-mortem cultures were performed, half showed staphylococcus aureus as a superimposed infecting organism.

Since the World War I epidemic numerous reports have appeared. The mortality rate of the disease remained high, particularly among infants and children, until the advent of sulfonamides and penicillin. Now a new era is upon us; antibiotic resistant organisms have developed and the management of the disease has become increasingly difficult.

Moreover, since 1956 there has been a striking increase in the actual incidence of the disease. For instance, at the University of Arkansas Medical Center between the years 1940 and 1955 a total of nine cases were diagnosed. From January 1956 through December 1960 a total of 42 cases were diagnosed. The cause of this sudden increase is not known, though it is undoubtedly due, in part, to increased efforts toward arriving at a positive diagnosis.

PATHOLOGY

Pneumonias, in general, are of two main types pathologically: primary alveolar and secondary interstitial. In the primary alveolar type the involvement is

mainly in the alveolar spaces. Consolidation results, which disables the patient because of reduction of the vital capacity. In the secondary interstitial type there is involvement of the bronchial wall, peribronchial tissue and the interstitial structures as well as the alveoli. Thus the suffocating effects of bronchial edema and parenchymal necrosis are added to the effects of consolidation.

Staphylococcic pneumonias are of the secondary interstitial or suppurative type. The infection descends the bronchial tree and spreads peripherally by lymphatics and interstitial tissues into the lung parenchyma. The extension by way of the bronchi accounts for the more or less segmental distribution and gives rise to rather "cone-shaped" areas of parenchymal infiltration. The base of the "cone" is on a large pleural surface and accounts for the high incidence of empyema. Multiple small abscesses in the lung periphery lead to the formation of bronchopleural fistulas and pneumothorax.

CLINICAL APPEARANCE

The clinical appearance is that of any other suppurative pneumonia. In children antecedent upper respiratory infections are usually present. The onset is usually abrupt with high fever, coughing, rapid respirations, and occasional cyanosis. Abdominal distention is often marked and diarrhea is frequently present (4).

The bacteriologic diagnosis of the disease can be made only on culture of staphylococcus aureus from the lungs or pleural cavity. Positive nose and throat

*Instructor, Department of Radiology, University of Arkansas Medical Center, Little Rock, Arkansas.

cultures are not considered evidence of the disease as the carrier rate in the general population is quite high.

ROENTGENOGRAPHIC FEATURES

Because of the difficulty in obtaining satisfactory material for culture, particularly in infants, the roentgenographic diagnosis of the disease is extremely important. The roentgenographic features, particularly in children, are fairly distinctive and often suggest the diagnosis quite early in the disease. Campbell, Gastineau, and Velios (2) have given an excellent description and correlation of the pathologic process and the roentgenographic appearance.

The character of the *infiltrate* may vary considerably. Since the spread is bronchial, the distribution often tends to correspond with lobes or segments. The involved areas often present a combination of consolidation and atelectasis, the atelectasis being secondary to bronchial occlusion due to inflammation. The process may develop with varying speeds in different portions of the lung so that involvement may begin in one area as resolution takes place in another.

There is often a conspicuous lack of correlation between the roentgenologic appearance and the clinical condition of the patient. The roentgenologic pattern may show rapid progression from a small area of infiltrate to consolidation of the entire lung while the clinical condition remains unchanged. Conversely, during the early phases of the disease while there is overwhelming toxicity there may roentgenologically be only minimal pneumonic infiltrate. Later, after marked clinical improvement, the involvement may be much more extensive.

Segmental emphysema may appear with the inflammatory bronchial occlusions and is usually associated with areas of atelectasis. Occasionally a diffuse obstructive emphysema may occur in the early stages associated with an extremely fulminating variety of the disease with very widespread involvement. Often the infiltrative process may be obscured by the diffuse emphysema. Campbell states, "The paradoxical observations of clear lung fields (often interpreted as

normal) in a dyspneic infant with clinical signs of severe bronchopneumonia spell an ominous prognosis to the pediatrician." Interstitial emphysema is not usually seen except in the form of pneumatoceles.

Pneumatoceles represent a special form of emphysematous interstitial cavity and are almost universally present at some stage of the disease. As the infection descends the bronchial tree, small peribronchial abscesses are formed once the bacteria penetrate the bronchial wall. The abscess ruptures into the bronchus leaving an air-filled cavity in the substance of the lung. A check-valve mechanism forms whereby air may enter the cavity on inspiration but is trapped during expiration. The cavity rapidly expands and presents a radiolucent cavity surrounded by varying amounts of reaction (2). During this early phase the pneumatocele is lined by a thin, loosely organized layer of granulation tissue. The wall becomes even thinner as the cavity fills with air. When the inflammatory process resolves, the typical thin wall cyst remains. At times, fluid levels may appear in pneumatoceles due to exudate within them.

As the inflammatory reaction subsides, the check-valve mechanism is lost. The cavity then collapses and the surrounding lung immediately re-expands. The pneumatocele may occasionally persist for many weeks, however, before the valve mechanism is lost and re-expansion occurs. Nonetheless, surgical intervention is usually not indicated for removal of the pneumatocele (1).

Pneumothorax is a frequent complication of staphylococcic pneumonia, particularly in infants. Pneumothorax may result from the rupture of a pneumatocele or of tiny subpleural abscesses into the pleural space. Rupture of a pneumatocele may rapidly produce alarming degrees of tension pneumothorax because the check-valve mechanism allows rapid entrance of air directly from bronchus to pleural space. This type is most frequent in very young infants.

Empyema is fairly common in staphylococcic pneumonia though not a frequent complication of the usual pneumonias of childhood. Forbes (4) found that in infants under six months of age who develop

empyema, the infecting organism was staphylococcus in 91 percent of the cases.

The empyema may be localized or diffuse. In the localized form the process is limited by pleural adhesions mainly to the area overlying the involved lung. If an associated pneumothorax is present, it will also be encapsulated by the adhesions. In the diffuse form there is usually an associated tension pneumothorax which occurs so rapidly that adhesions have no time to form.

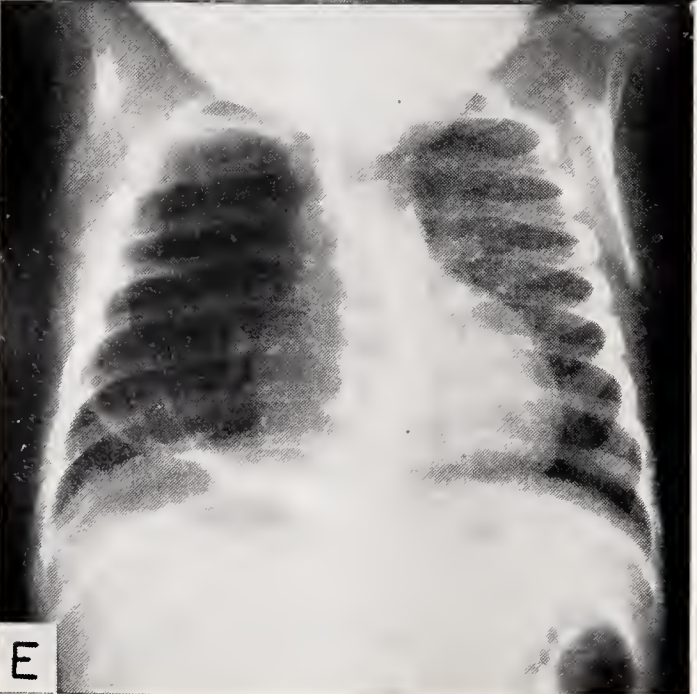
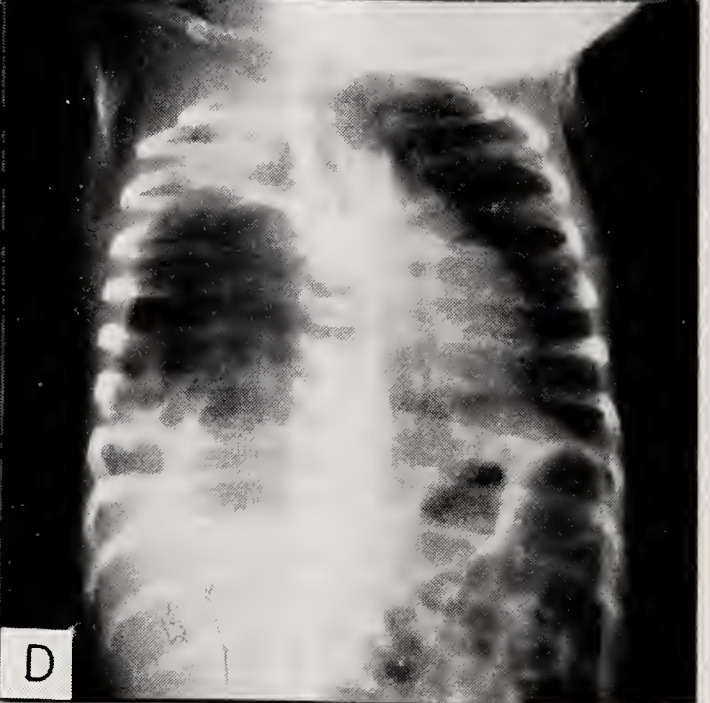
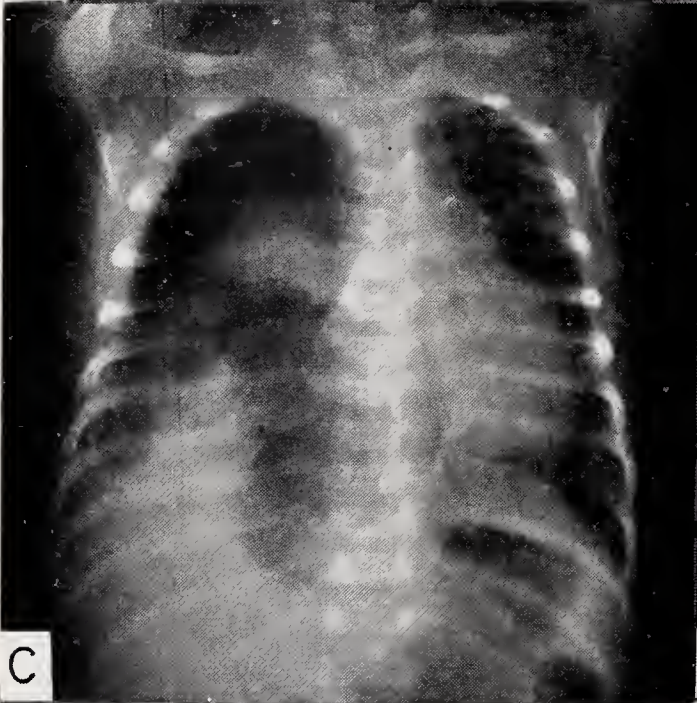
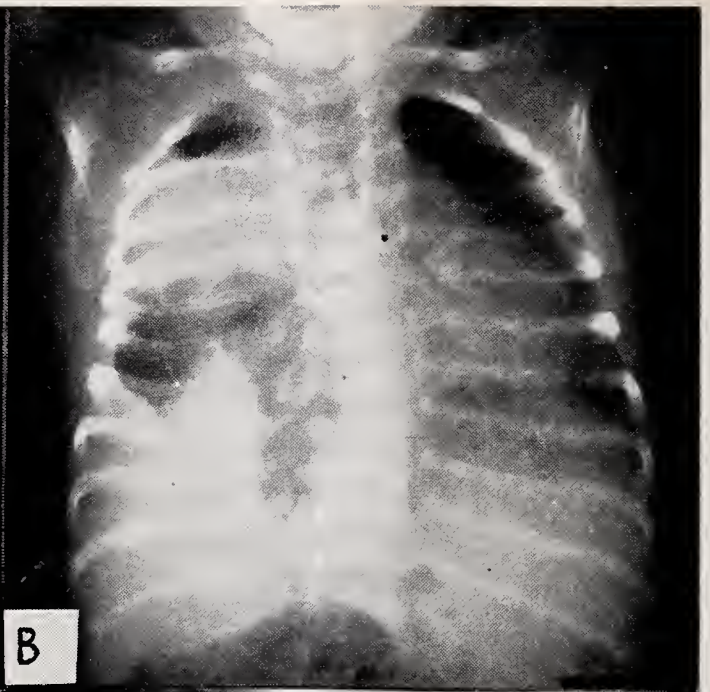
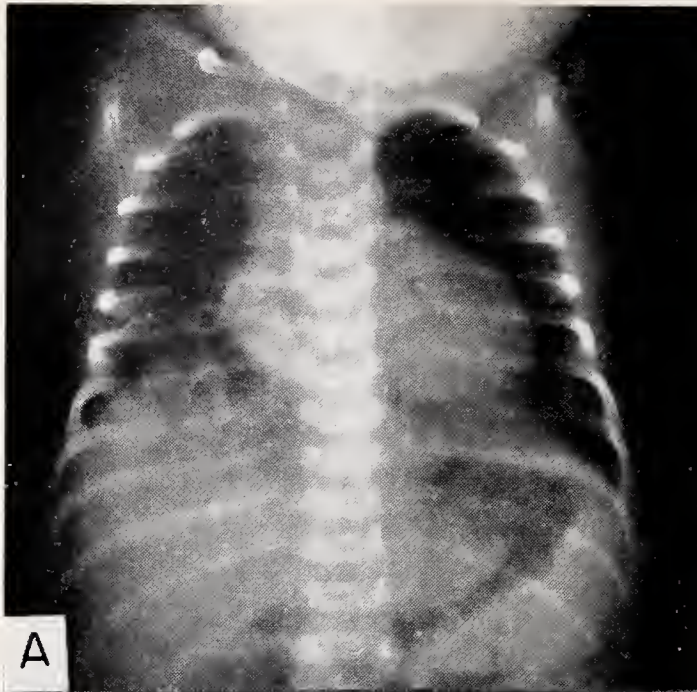
Not all of the features of the disease described above are necessarily present in any one patient, nor do they necessarily occur in any given order. However, it will be found that in many cases the roentgenographic picture is distinctive enough to strongly suggest the diagnosis of staphylococcic pneumonia.

ACKNOWLEDGMENT

The author gratefully acknowledges the guidance and assistance of Dr. Howard J. Barnhard, Professor and Chairman, Department of Radiology, University of Arkansas Medical Center.

References

1. Caffey, J.: On the Natural Regression of Pulmonary Cysts During Early Infancy, *Pediat.* 11:48-64, 1953.
2. Campbell, J. A.; Gastineau, D. C., and Velios, F.: Roentgen Studies in Suppurative Pneumonia of Infants and Children, *J.A.M.A.* 154:468-472, 1954.
3. Chickering, H. T., and Park, J. H., Jr.: Staphylococcus Aureus Pneumonia, *J.A.M.A.* 72:617-626, 1919.
4. Forbes, G. B.: Diagnosis and Management of Severe Infections in Infants and Children; Review of Experiences Since Introduction of Sulfonamide Therapy, *J. Pediat.* 29:45-67, 1946.



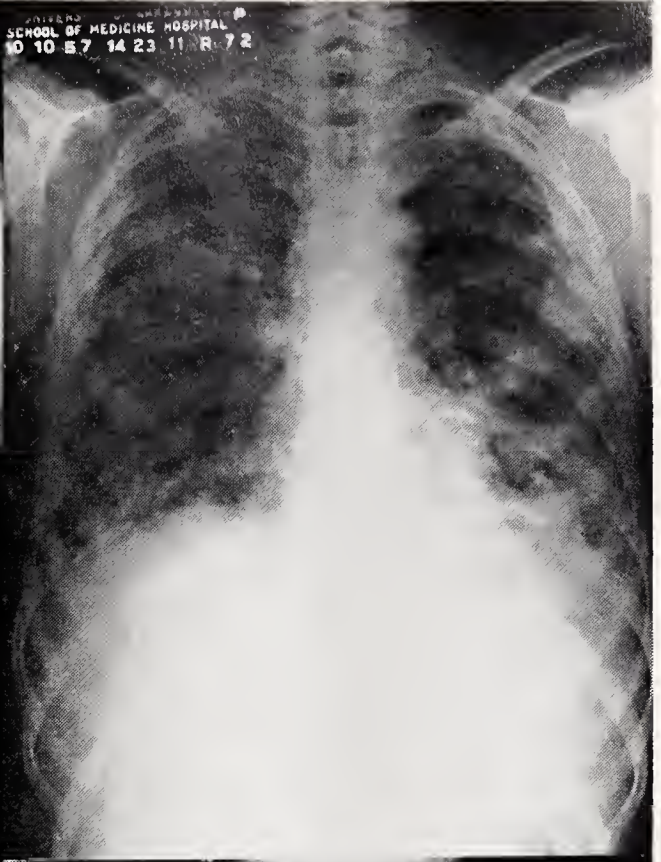
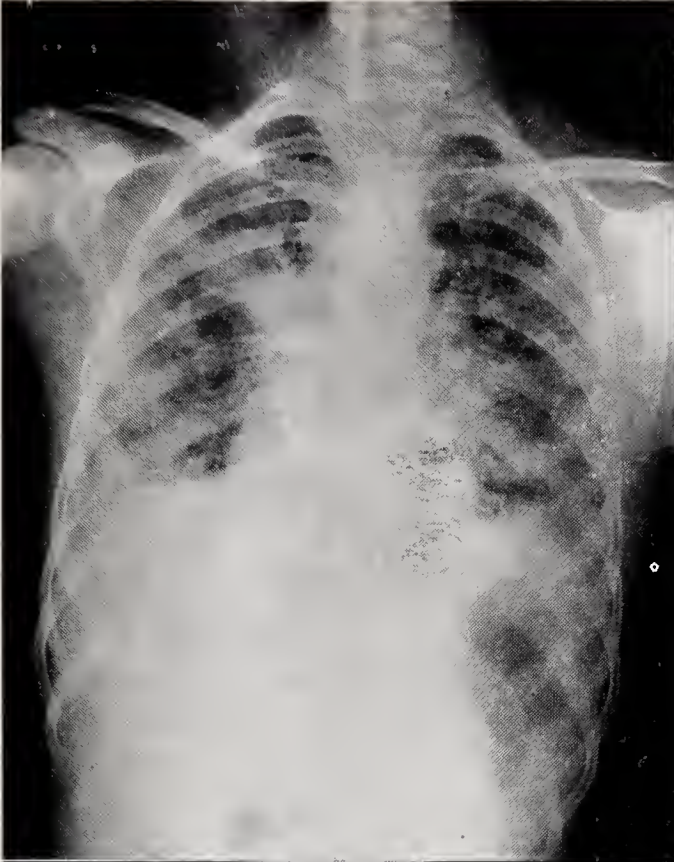
CASE I

- A. 2-20-59—Patchy pneumonitis in the right base with small pneumatocele in the lateral portion.
- B. 3- 2-59—Development of right pyopneumothorax with several large pneumatoceles and pleural loculations.
- C. 3- 6-59—Persistent tension pneumothorax and multiple pneumatoceles.
- D. 3-13-59—Pneumothorax gone. Right lung re-expanded except for pneumatoceles.
- E. 3-23-59—Residual pneumatocele amidst an over-expanded right lung.

STAPHYLOCOCCIC PNEUMONIA

A

B



C

D



CASE II

- A. 10- 3-57—Diffuse infiltrate.
- B. 10-10-57—Partial clearing of infiltrate. Bilateral empyema.
- C. 10-17-57—Decrease in empyema. Further clearing of infiltrate. Pneumatoceles in left base.
- D. 2- 4-58—Complete resolution except for some minor fibrotic changes and pleural thickening.

Available only to physicians for their distribution—

Complete Cholesterol Depressant Menus and Recipe Book

A new, authoritative patient-aid . . . for professional distribution only

Now available for use in your practice from The Wesson People . . . easy-to-use manual of 40 pages, including all necessary diet instructions . . . menus, recipes, shopping and cooking guidance . . . all worked out for you . . . so arranged and printed that you have only to check the desired daily calorie level before giving the book to your patient.

You will find this book invaluable for treating patients with elevated serum cholesterol.

Complete menus for 10 days enable you to prescribe diets which are appetizing, nutritiously adequate and which can exert cholesterol depressant activity. Special attention has been given to constructing the menu patterns so that they adhere as closely as permissible to the patient's normal eating habits.

NRC Standards fulfilled. Each menu has been calculated to provide the proper daily allowance of proteins, vitamins and other nutrients as recommended by the Food and Nutrition Board of the National Research Council.

Weight control is achieved as each day's menu is given at 3 calorie levels—1200, 1800 and 2600 calories. You prescribe the level most desirable and modify as desired.

Variety and appetite appeal for patient are built into the menu plan to an extent not previously accomplished. Alternate choices for main dishes minimize monotony, encourage the patient to follow closely the menu plan you specify.

Complete recipes—65 in all—are included to assure that the specified menus provide prescribed levels of calories, the pre-determined ratio of poly-unsaturated to saturated fat, plus essential nutrients.

Dietary fat is controlled so that approximately 36% of the total calories are derived from fat and at least 40% of these fat calories are from poly-unsaturated components (linoleates) as found in pure vegetable oil. The replacement of saturated dietary fat by this percentage of poly-unsaturated fat has been found in clinical studies most effective in the reduction of serum cholesterol and in its maintenance at desirable levels. More liberal menus are provided for maintenance after the patient's progress indicates that desired therapeutic results have been accomplished.

Family meal preparation is simplified. The menus are planned around favorite foods having wide appetite appeal for all members of the household. Patients can entertain in comfort—enjoy cakes, cookies, snacks, prepared with recipes which meet medical requirements.

A high degree of satiety is achieved even at the lower calorie levels, because Wesson provides an unexcelled source of concentrated, slow-burning food energy.

Adaptable for use with diabetics. Carbohydrates have been calculated to fall within the acceptable range for patients to whom a diet planned for diabetes is important. Calories, which must be supplied from fat when the carbohydrate intake is limited, are provided by desirable poly-unsaturated vegetable oil.

WESSON'S IMPORTANT CONSTITUENTS

Wesson is 100% cottonseed oil—winterized and of selected quality

Linoleic acid glycerides (poly-unsaturated) 50-55%
Oleic acid glycerides (mono-unsaturated) 16-20%

Palmitic, stearic and myristic glycerides (saturated) 25-30%
Phytosterol (Predominantly beta sitosterol) 0.3-0.5%
Total tocopherols 0.09-0.12%
Never hydrogenated—completely salt free

*Poly-unsaturated Wesson is unsurpassed by any readily
available brand, where a vegetable (salad) oil is medically recommended
for a cholesterol depressant regimen.*

Your Cholesterol Depressant Diet Book

Menu plan for

Mrs. John Doe
DATE Feb. 1961

DATE Feb. 1961

JOSEPH ROE

M.D.

Wesson

STRINGENT CONTROL
breakfast

1111111111

sample

11

Menu 1

1949 1950 1951 1952 1953 1954 1955

branch substitution

USE THIS HANDY ORDER FORM

The Wesson People, 210 Baronne St., New Orleans 12, La.

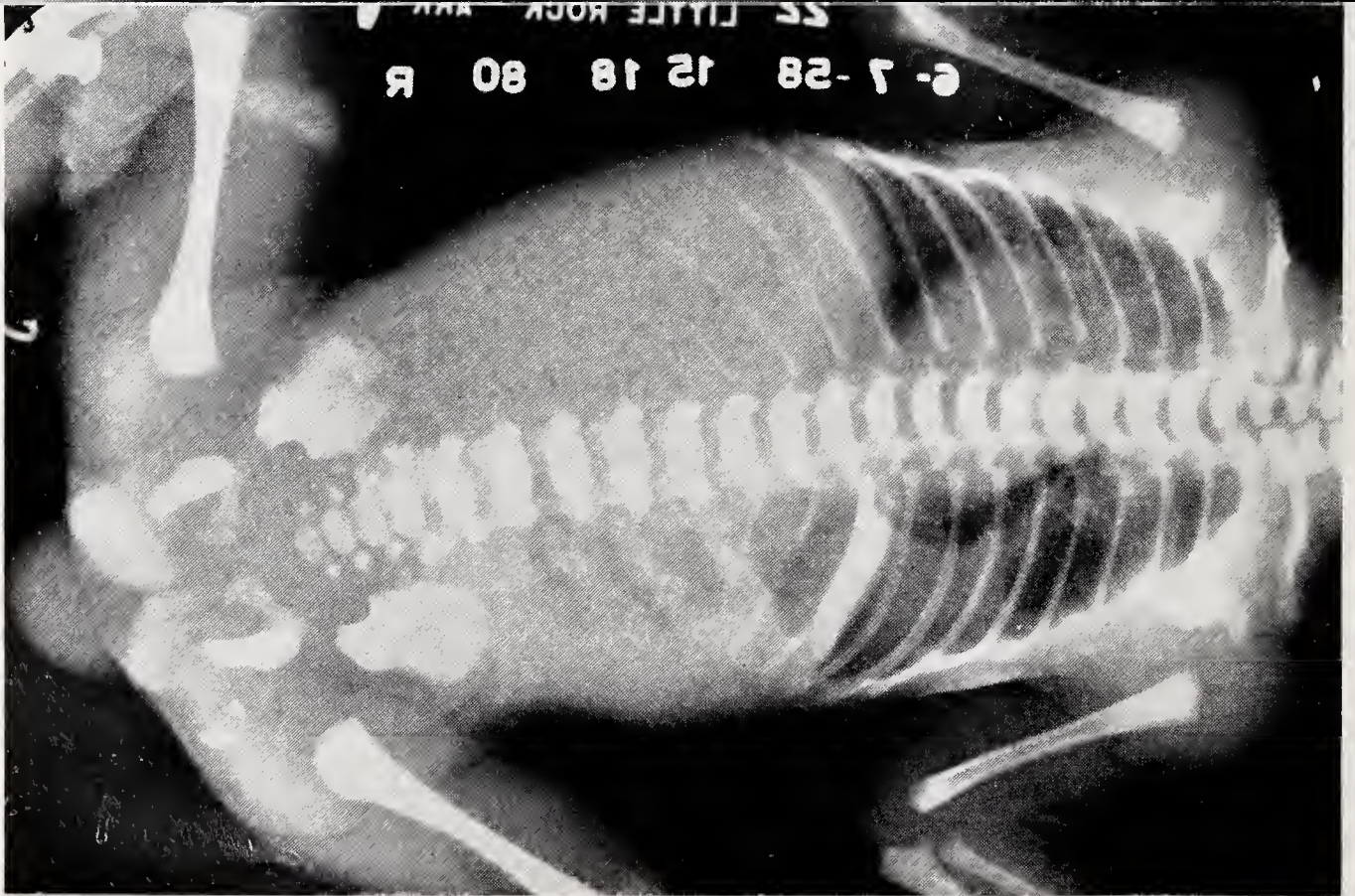
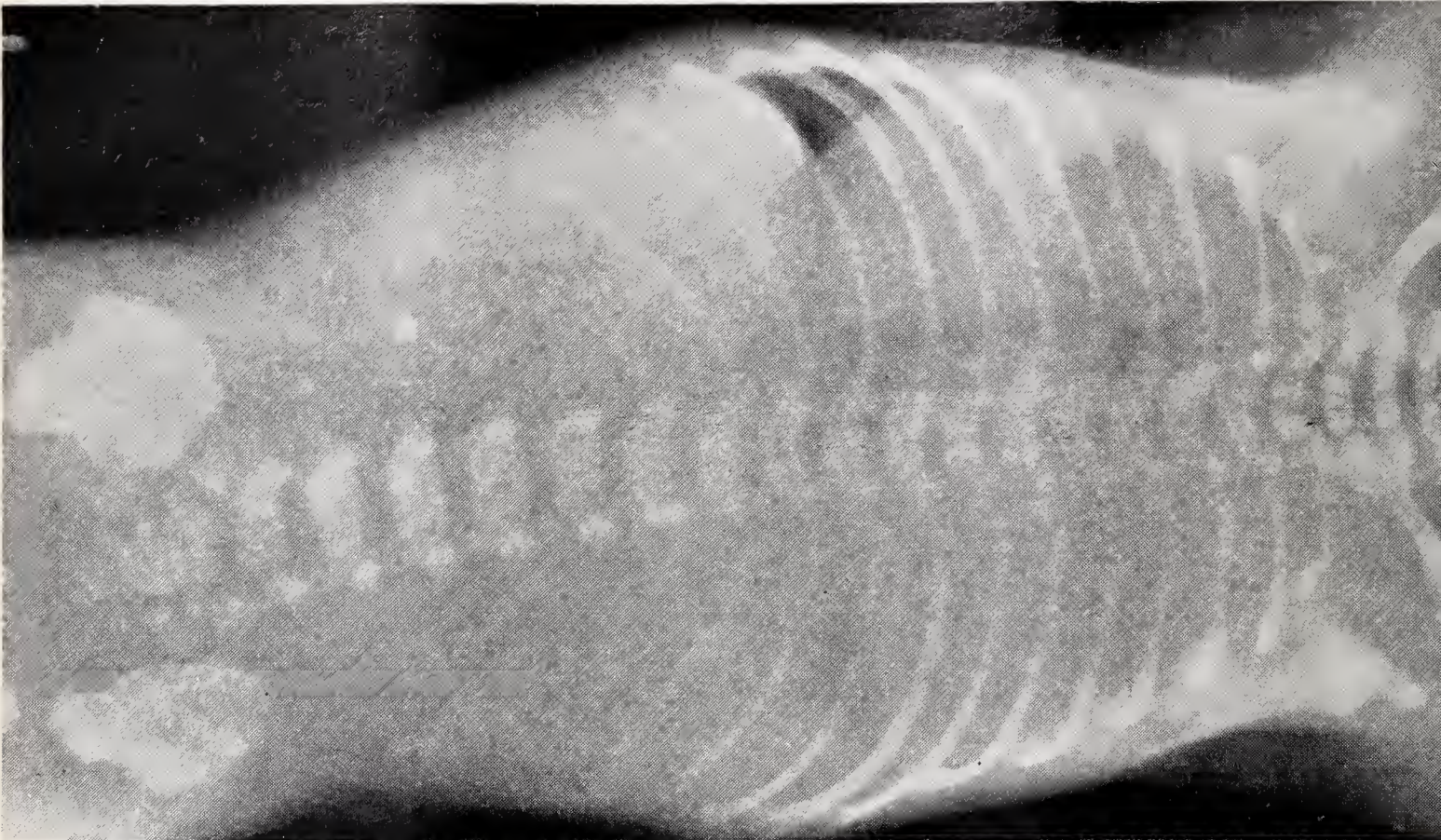
Please send _____ free copies of
"Your Cholesterol Depressant Diet Cook Book" for use with patients.

DR. _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

What Is Your Diagnosis?



From Radiology Dept., University of Arkansas Medical Center.
FOR ANSWER SEE PAGE 82

Arkansas Public Health at a Glance

Deaths From Accidental Drowning In Arkansas

Arkansas is blessed with thousands of square miles of lakes, hundreds of miles of streams, and thousands of acres of ponds, reservoirs, and bayous, most of which are open, free, and inviting to the potential swimmer, angler, boater, skier, and picnicker. In addition, there are hundreds of swimming pools and beaches, public and private, which offer entertainment, relaxation, and physical exertion to thousands of Arkansans and tourists each summer.

As incomes have risen and working hours have been shortened, the numbers of people using the various recreational areas and facilities have risen sharply during the past several years. Records of the State Publicity and Parks Commission show that an estimated 205,000 persons visited the various state parks in 1947. The estimate for the number of park visitors in 1959 was 2,031,000. Of course this does not include the hundreds of thousands who participated in water sports and recreational activities outside the state parks.

It is, therefore, surprising that the number of drowning victims each year has remained relatively constant during the past ten years. A total of 960 deaths by drowning was reported from 1950 through 1959. Of that number, 230 victims were reported as having been occupants of small boats.

The following table shows the number of drownings reported during the ten-year period:

** Reported Deaths from Accidental Drowning and Submersion, (Including Occupants of Small Boats) Arkansas, 1950-1959*

Year	Number
1950	112
1951	101
1952	88
1953	107
1954	88
1955	92

1956	89
1957	81
1958	103
1959	99
Total	960

Boats of varying types and sizes are visible in virtually every community in the state now. William M. Apple, a Little Rock businessman, and a member of the Advisory Committee of the Outboard Boating Club of America, estimates that there are at least 50,000 small boats in Arkansas today, whereas in 1950 there were an estimated 20,000 small boats in the state. With this phenomenal increase in the number of boats in use, it is almost miraculous that the number of drowning victims among boat users has not increased accordingly. The following table shows the number of drownings of occupants of small boats reported during the ten-year period, 1950-1959.

**Reported Deaths from Accidental Submersion of Occupants of Small Boats, Arkansas, 1950-1959*

Year	Number
1950	38
1951	17
1952	17
1953	33
1954	16
1955	27
1956	15
1957	12
1958	26
1959	29
Total	230

The deaths of the 70 drowning victims in 1959 (not including 29 occupants of small boats) occurred in various places. It is interesting to note that only two of the deaths occurred in places for organized recreation and sport. The following table shows the places in which the drownings occurred in 1959. (Other Specified Places includes lakes, rivers, streams,

FEATURES

ponds, etc. which are not given specific place code numbers.)

**Reported Deaths from Accidental Drowning by Place of Occurrence, Arkansas, 1959*

Place	Number
Home -----	4
Farm -----	12
Industrial Place or Premises -----	1
Place for Organized Recreation and Sport -----	2
Other Specified Places -----	31
Place Not Specified -----	20

A study of the age, sex, and color of drowning victims (not including those who were occupants of small boats) reveals that white males account for the largest number of accidental drownings. A total of 70 drowning deaths was reported in 1959, of which 45 (64 percent) were white males. Negro males accounted for 14 (20 percent) of the deaths. Forty of the deaths (57 percent) were reported in the age groups under twenty years of age.

**Reported Deaths From Accidental Drowning by Age, Sex, and Color, Arkansas, 1959*

Age Group (years)	White Male	White Female	Negro Male	Negro Female	Total
Under 1 year	1	0	0	0	1
1-4	3	3	0	0	6
5-9	5	2	2	0	9
10-14	5	1	7	1	14
15-19	6	2	2	0	10

20-29	3	0	1	0	4
30-39	9	0	1	0	10
40-49	6	1	0	0	7
50-59	3	0	0	1	4
60-69	2	0	0	0	2
70-79	2	0	1	0	3
80/	0	0	0	0	0
Total	45	9	14	2	70

The fact that deaths by drowning have remained relatively constant, while the number of persons participating in water sports and related activities has risen tremendously in the past several years, reflects credit on those groups and organizations engaged in water safety education and training. Such groups include the American Red Cross, Boy and Girl Scouts, Y.M.C.A. and Y.W.C.A., boys clubs, schools and colleges, and various municipal recreation programs over the state.

Swimming and water safety instruction for young children is one of the best ways of preventing future deaths by drowning. Every community, urban and rural, can arrange for some sort of swimming instruction for the children of the community. Requests for suggestions and assistance can be made through the county chapter of the Red Cross, the County Health Department, or the State Health Department.

*Information obtained from Bureau of Vital Statistics, Arkansas State Board of Health.

Open Heart Surgery

SAM J. KUYKENDALL, M.D. M.Sc., F.A.C.S.

Extracorporeal circulation now has become a well-established method which has greatly enhanced the surgery of heart disease and permits correction of intracardiac defects which less than a decade ago were hopeless. Dramatic though the surgery may seem, the definitive operative procedure itself plays only one part in achieving the ultimate result. The surgeon must give much of the credit for success to the proper pre-operative diagnosis, the technical operation of the cardiac by-pass system, and the meticulous post-operative care of the patient. A successful outcome depends upon a group effort of the surgeons, the physiologists, the cardiologists, the operating team, the anesthesiologists, the constant nursing care, and the trained technical supervision of intricate mechanical apparatus.

The technique of hypothermia first made intracardiac surgery possible and is still useful in certain situations, such as in congenital aortic stenosis in children and in pulmonary valvular stenosis. In order to facilitate more extended periods of time for surgery under direct vision within the heart whole-body perfusion by means of a pump-oxygenator apparatus had to be developed. Extensive laboratory research has resulted in the development of established methods of cardiac by-pass. There is no "standard method." Different techniques are applicable to different anatomic defects and are dependent upon the preference and experience of the individual surgeon. Several different types of oxygenators are now in use, e.g. screen, bubble, and membrane oxygenator systems. Modifications of equipment and techniques are continuously being made. A number of surgeons have achieved comparable results with the various types of "heart-lung machines." The preference of equipment and methods employed is determined by the experience obtained by a particular

group through extensive laboratory trials prior to actual clinical use.

Tremendous strides have been made in the past decade in the field of intracardiac surgery, and further advances continue to be made. At the present time, the best results achieved in surgically remedial heart diseases continues to be with uncomplicated atrial septal defects and ventricular septal defects and with acquired mitral stenosis. The mortality rate of surgical correction in these conditions has now been lowered to ten percent, or less, in the larger reported series. Correction of the tetralogy of Fallot still carries a higher mortality rate. The results in repairing other conditions are not nearly so encouraging. Other congenital defects now considered operable include aortic and subaortic stenosis, pulmonic valvular and infundibular stenosis, anomalous pulmonary venous drainage, transposition of the great vessels, and aortico-pulmonary septal defects. Other acquired lesions considered operable with hopes of improvement include calcific aortic stenosis, aortic insufficiency, mitral insufficiency, aneurysm of the left ventricle and ventricular septal defect secondary to myocardial infarction, sinus of Valsalva fistula, atrial myxoma, and traumatic cardiac defects. Presently, much experimental work is being directed toward the development of functional prosthetic replacements for diseased mitral and aortic valves.

Now that we thoracic surgeons have become more adept at the repair of intracardiac defects it behooves us to encourage the development of more efficient diagnosis and evaluation of patients for surgery and better facilities for the care of such patients post-operatively from the standpoint of nursing care, monitoring equipment, and necessary laboratory procedures.

In the past six years, in no field of medicine has such dramatic and encouraging progress been made as in the development

*Donaghey Building, Little Rock, Arkansas.

of open cardiac surgery. With continuing modification and simplification of equipment and techniques and better diagnostic facilities for proper selection of patient it is hoped that it will become more feasible

and practical for well-trained thoracic surgeons in private hospitals to obtain results comparable to those now being achieved in the larger institutions.

MEDICINE IN THE NEWS

The Month in Washington

From Washington Office AMA:

Washington, D. C. — The American Medical Association branded as untrue certain statements by Abraham Ribicoff, Secretary of Health, Education and Welfare, concerning the Administration's legislative proposal to provide medical care for the aged under Social Security.

Dr. Edward R. Annis, Miami surgeon representing the AMA, accused Ribicoff of misrepresenting the role of doctors under the administration proposal. Dr. Annis answered Ribicoff on a radio-television program with Sen. Kenneth B. Keating (R., N. Y.) which was taped in Washington. Ribicoff had made the misrepresentation on an earlier Keating Program.

Dr. Blasingame said Ribicoff's statement before the editors that physicians are not included in the administration proposal, the King bill, "simply is not true." The AMA official pointed out that the bill includes interns and residents in teaching hospitals as well as pathologists, radiologists, psychiatrists and anesthesiologists working in hospitals or serving hospitals' outpatient clinics.

Dr. Blasingame also disputed Ribicoff's contention that the King bill is not socialized medicine.

"By common definition, any scheme which calls for a system of compulsory health care which is administered, financed, and controlled by the federal government is socialized medicine for that segment of the population it serves."

"It seems strange to us that Mr. Ribicoff continues to lobby for the King bill while completely ignoring the Kerr-Mills law, passed by Congress last year with strong support by the nation's physicians."

Krebiozen Evaluation

The Department of Health, Education and Welfare has agreed to make an impartial evaluation of the controversial cancer drug Krebiozen.

U. S. District Judge Julius H. Miner of

Chicago requested the evaluation before proceeding with a \$300,000 libel suit filed by Andrew C. Ivy, M.D., a leading endorser of the drug, against George D. Stoddard, Ph.D., chancellor of New York University and former president of the University of Illinois.

In a Letter to HEW Secretary Ribicoff, Miner said:

"In my humble judgment, Krebiozen has too long been a controversial subject and the American public deserves that it be examined under neutral supervision and by the most competent experts in whom the people have implicit confidence."

Ribicoff said the National Cancer Institute would evaluate the drug when its sponsors presented the necessary data. But, he said, "any decision to undertake a study with human cancer patients must await, and depend on, the results of the evaluation of the existing clinical data."

Physicians' Retirement

A new bill to encourage physicians and other self-employed persons to set up their own retirement plans started through Congress with approval of the House Ways and Means Committee.

Bearing the same number, H.R. 10, as a similar bill which died in Congress last year, the new measure would permit a self-employed person to defer taxes on income placed in a private retirement program. The special treatment would be limited to \$2,500 or 10 per cent of income each year, whichever is smaller.

Such income could be invested in qualified pension trusts, annuity programs, profit-sharing plans or a new type of non-transferable government bonds redeemable when the individual reaches retirement age or suffers disability.

An individual could start drawing benefits at age 59½ or earlier in the case of disability. A self-employed person would have to start drawing benefits by age 70½.

If a self-employed individual had more than three employees, he would be required to set up pension plans for them before he could benefit himself.

Report of Second Institute on Clinical Teaching Now Available

"Is American medical education so bound by convention and restricted by its past that it can neither experiment nor change? Is some of our failure to experiment related to restrictions imposed upon us by our examining boards? Are universities too poor, too fainthearted, or too complacent and preoccupied to provide dynamic leadership in rehabilitating our worn-out and antiquated processes in medical education? How much longer can we afford to produce pill-pushing doctors rather than physicians scientifically oriented in the care of sick people?"

Readers of the Report of the Second Institute on Clinical Teaching, recently published as Part 2 of the April issue of The Journal of Medical Education, will find these challenging questions in the book's introductory remarks by Dr. Charles G. Child III, chairman of the Institute.

Looking in retrospect at the 1958 and 1959 Institutes, Dr. Child concludes that medical education is in fact in transition from trade school to university, that more and more clinical faculties are composed of full-time scientists deeply concerned with clinical science in patient care, and that this metamorphosis is desirable.

The pros and cons of these matters, which were the concern of the planning committee who organized the program for the Institute, are revealed in the ensuing chapters. The book is organized much as the Institute itself, with the basic division into three topics. All the formal papers are presented in their entirety, and two chapters are devoted to tables and text reporting the results of pre-Institute opinion surveys on the internship and the physicians-patient relationship.

Edited by Helen Hofer Gee and Dr. Child, the book reporting the 1959 Teaching Institute is a companion volume to the 1958 Institute report and thus completes the set documenting the two Institutes on clinical teaching. Twenty-nine authors have made significant contributions to the report.

Single copies may be purchased from the AAMC's Division of Basic Research at \$2.00 per copy. Clothbound copies are \$3.00.

Sources of Financial Aid To Medical Students

Each year the Association of American Medical Colleges and its member schools receive a great many requests for information on financial aid available to medical students. As a part of the Association's intensive action-program dealing with the problem of medical student finances, a brochure entitled Sources of Financial Aid to Medical Students will be published in the next few weeks. This brochure is designed to help medical students and prospective applicants to medical school get in touch with the individuals in each State in the U. S. who can provide concrete information and help on the problem of financing the cost of a medical education.

The brochure will provide a list of names and addresses of persons in medical schools, county medical societies, foundations, government agencies, service clubs and other groups who can provide specific information on scholarship and loan funds for which medical students are eligible. These names and addresses will be grouped by states from Alabama to Wyoming as many sources of financial assistance to medical students have specific requirements of residence in a given state. National programs of private agencies will be listed separately. Finally, a brief resume of Federal government programs will be provided with the address of the particular Federal agency to be contacted.

Every effort has been made to make the listing of sources of financial aid as current as available information permits. The Association would appreciate it if readers of the brochure would supply names and addresses of any agencies or organizations which should be added to the list. The brochure will be given wide distribution to universities, colleges, and other organizations interested in the problem of medical students' finances.

Copies may be obtained by writing to Dr. Ward Darley, Executive Director, AAMC, 2530 Ridge Ave., Evanston, Illinois.

* * *

Dr. Fount Richardson, head physician at the University Infirmary and past president of the American Academy of General Practice was awarded the highest

award the University of Arkansas and its Alumni Association can bestow upon an alumnus at the Spring Commencement Ceremony which was held on the Fayetteville campus June 2 and 3.

Dr. Richardson, a native of Ben Franklin, Texas, has treated university students since 1937 when he joined the school's staff. He is a charter member of the Arkansas Academy of General Practice and has also served as president of the Washington County Medical Society and the Arkansas Medical Society.

DR. SHOREY APPOINTED NEW DEAN OF MEDICAL SCHOOL

Dr. Winston K. Shorey, who is the newly-appointed Dean of the School of Medicine at the University of Arkansas Medical Center in Little Rock, will assume duties August 1.

Dr. Shorey, who presently is Associate Dean of the University of Miami, has a background of private practice as well as academic work and training. He also is active in numerous professional organizations, including the Dade County Medical Association, which is a local unit of the Florida Medical Association.

The new Dean was chosen on recommendations of a selection committee made up of Medical Center faculty and officials of the Arkansas Medical Society, and headed by Storm Whaley, Vice President for Health Sciences at the University. The appointment was announced last May by Dr. David W. Mullins, President of the University of Arkansas at Fayetteville.

Dr. Shorey, commenting for news articles which accompanied his appointment, said he is hopeful of getting acquainted as quickly as possible with Arkansas physicians and the work of the state Medical Society.

"My plans are to get acquainted with as many of the practicing physicians in Arkansas as possible. I also hope to attend medical meetings within the state wherever and whenever possible," he said.

Mr. Whaley said several factors influenced the selections committee in arriving at its recommendations on Dr. Shorey. One, that at Miami, Dr. Shorey has been associated with a medical school similar in size and scope to that of Arkansas', and deriving a substantial portion of its support

from the state. Second, that he possesses a well-rounded background of experience in medical education, including administration and instruction in the clinical areas. And third, the fact that he also has engaged in the private practice of medicine.

"I am looking forward to working closely with him in our mutual objective of the continuing development of the School of Medicine," said Mr. Whaley.

Dr. Shorey was born at Wheelock, Vermont, in 1919. His wife, also a doctor, is from Richmond, Va. He received his M.D. Degree at the University of Pennsylvania in 1943, where he took his intern and residency training and where he later joined the staff as an assistant instructor. While teaching at Pennsylvania, he was in part-time practice for some six years with another physician in Philadelphia. He held a Thompson-Hawley Fellowship in gastroenterology while on the Pennsylvania staff.

He moved to Miami in 1955 as an assistant professor, and in 1957 was promoted to associate dean under Dr. Homer F. Marsh, who just recently was named Vice President in charge of the University of Tennessee's medical units at Memphis.

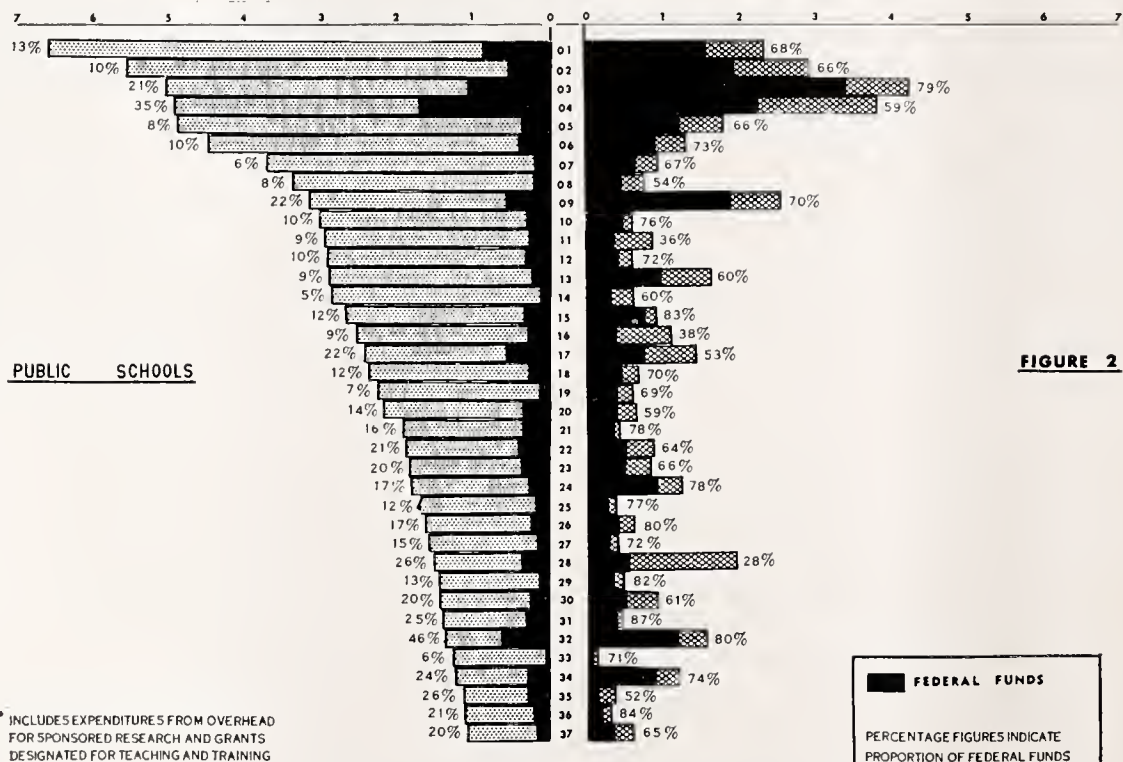
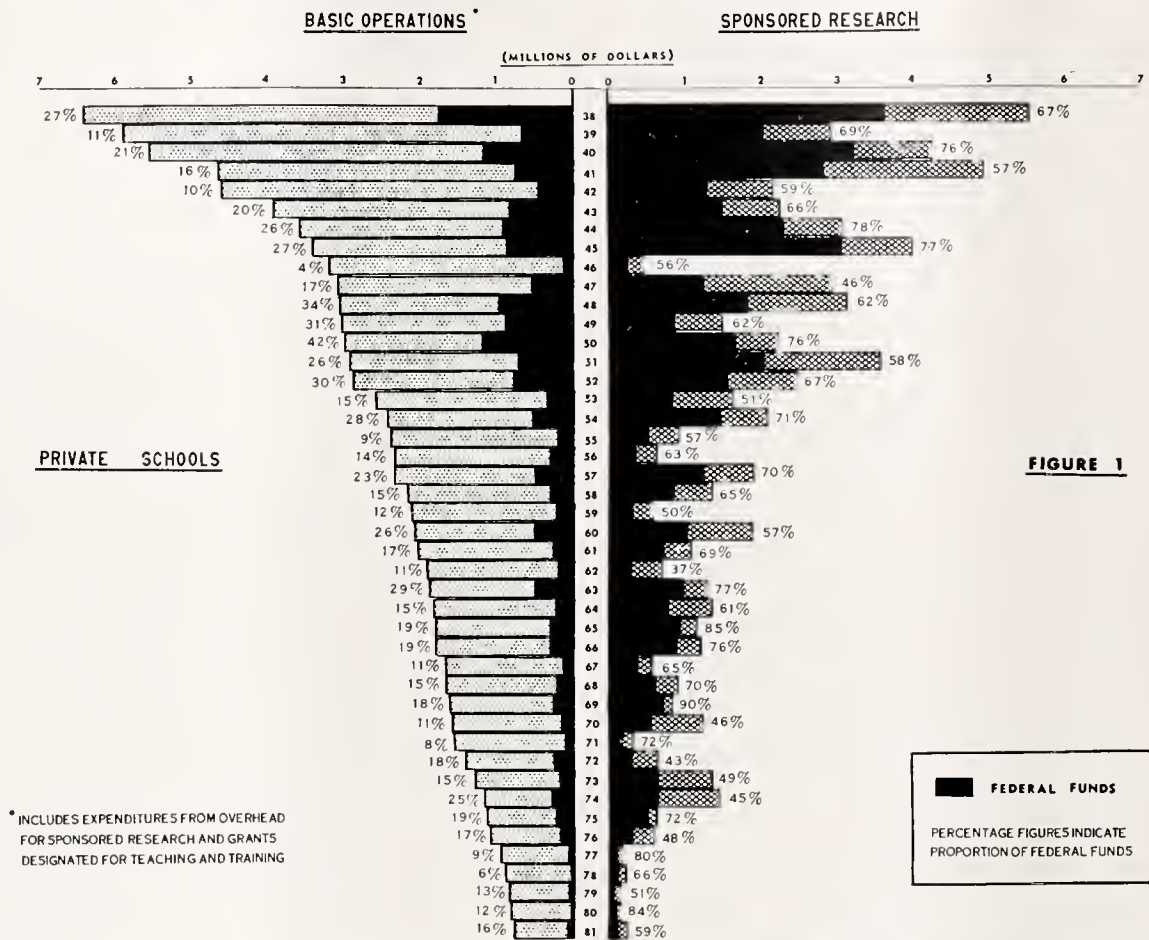
Dr. Shorey is on the attending staff at Jackson Memorial Hospital in Miami, is a member of the Dade County Hospital Advisory Board and of the Board of Directors of the Dade County Welfare Planning Council. His memberships include the American College of Physicians and the American Association for the Advancement of Science.

From Association of American Medical Colleges Relationship of Expenditures From Federal Funds Available for Basic Operations and From Funds Designated for Sponsored Research for Each of 44 Private and 37 Public Four-Year Medical Schools—1958-59

Federal Funds as sources of expenditure for U.S. medical schools have now achieved the place of first importance in their overall financing. For the academic year 1958-59, the total expenditure from Federal funds amounted to 35% of the total expenditure from all funds.

Figures 1 and 2, on the following page, for the 44 private and 37 public four-year schools respectively, show the relationships of expenditures from Federal and non-Fed-

**RELATIONSHIP OF FEDERAL FUNDS TO FUNDS AVAILABLE FOR BASIC OPERATIONS
AND TO FUNDS DESIGNATED FOR SPONSORED RESEARCH
FOR EACH OF 44 FOUR-YEAR PRIVATE AND 37 FOUR-YEAR PUBLIC MEDICAL SCHOOLS — 1959**



eral funds available for basic operations on the left side and from Federal and non-Federal funds designated for sponsored research on the right. The schools are arrayed in the order of their expenditures for basic operations. The lack of any consistent relationship between the two categories of expenditure is readily apparent.

The percentage figures at the ends of the bars indicate for each school the proportion of Federal funds involved in each category of expenditure.

As far as expenditures for sponsored research are concerned, the ratio of Federal participation to the total for all four-year schools was 65%, with a per school variation from 90 to 28%. Federal participation in expenditures for sponsored research was considerably greater in the case of the private than the public schools—an average of \$1,054,000 for the former and \$762,000 for the latter. For the private schools as a group, Federal participation amounted to 65%; for the public group, 66%.

As far as expenditures for basic operations are concerned, for all schools the ratio of Federal participation to the total was 17% with a per school variation of from 46 to 4%. The average expenditure from Federal funds available for general operations was greater for the private than for the public schools—\$476,000 for the former and \$393,000 for the latter. The percentage of Federal participation for the private schools was also higher—20% as opposed to 15%.

Federal funds available for basic operations come essentially from three sources: 1. overhead from grants for sponsored research, 2. categorical teaching grants (oncology, cardio-vascular disease and psychiatry), and 3. grants for research training. While these are all funds designated for specific purposes, they can be counted as available for general operations because their use is generally in line with the schools' basic academic purposes. Of the above three sources, funds available from research overhead vary in direct proportion to expenditures for sponsored research. Federal funds available for categorical teaching have now stabilized at between 6½ to 7 million dollars per year. Grants for research training have in-

creased from a little over ½ million dollars in 1949 to almost 13 million dollars in 1958. Between 1958 and 1960 these grants increased to over 30 million dollars.

Since the overhead allowances (8%) for research training grants fall short of meeting the full cost, the time may be at hand when the impact of such grants, particularly in the high expenditure schools, may be calling for the expenditure of general operating funds disproportionate to the needs for meeting other responsibilities.

ANNOUNCEMENTS

Pelham McGehee, M.D. of Lake Village, Arkansas is retiring from active practice of medicine at the end of this year. Due to his retirement Dr. McGehee wishes to sell the inventory of his office and practice at Lake Village to one or two young doctors. His office is in a very desirable location, very near the Lake Village Infirmary which has a resident staff of three doctors. There is only one other doctor in practice in this location.

All persons interested either write Dr. McGehee or visit his office by appointment.

1961 SCIENTIFIC SESSION

American Cancer Society
Biltmore Hotel
New York City, New York
October 23-24-, 1961

TOPIC: THE PHYSICIAN AND THE TOTAL CARE OF THE CANCER PATIENT

For further information write:

Professional Education Section
American Cancer Society
521 West 57 Street
New York 19, N. Y.

DATES TO REMEMBER

Annual meeting, Arkansas Academy of General Practice, Little Rock, Arkansas _____ Oct. 11-12-, 1961

1961 Clinical Meeting AMA, Denver, Colorado _____ Nov. 27-30, 1961

Obituary

Dr. Albert Reuel Sparks of Little Rock died of pneumonia in a hospital April 29 after a short illness. He was an honor graduate of Little Rock High School in 1928 and the University of Arkansas, where he was the first student in Arkansas to be initiated into Phi Beta Kappa. He received his doctor's degree in 1937.

He was a member of the Pulaski County Medical Society, the Arkansas Medical Society, the American Medical Association, Southern Medical Association and the American Academy of General Practitioners.

Dr. Sparks was a member of the West-over Hills Presbyterian Church.

Survivors include his widow, Mrs. Ruth Jane Criglow Sparks; three daughters, Mrs. Caroline Sparks Hockersmith; Miss Judie Sparks and Miss Janyth Sparks; a son, Timothy Reuel Sparks, all of Little Rock; three brothers, and a sister.

PERSONAL AND NEWS ITEMS

Dr. James Callaway, husband of the former Miss Jane Kolb of Clarksville, was recently one of 20 to receive a \$1,000 fellowship for second year general practice residency in an approved medical school.

Dr. James M. Kolb of Clarksville was one of the Arkansas delegates to the annual session of the American Academy of General Practice held in Miami Beach, Florida, April 14-21. He also served as assistant sergeant-at-arms in the congress of delegates.

Dr. W. F. Barrier, Malvern physician, has joined the staff at the Benton unit of the State Hospital as part-time physician. He will continue his private practice in Malvern in the afternoons and on week-ends.

Dr. A. B. Robertson of Rison, retired physician, was recently honored on his 50th year as a Mason by the Masonic Lodge of Rison.

A new clinic in Wilmot is nearing completion as a result of hard work of all the people in that area. **Dr. James Sims** of Bonita, La., with his family, moved to Wilmot last year and will have his office in the new clinic. When completed, the cross-shaped Center will provide a wing to be used as a rest home for elderly people. The hospital's other three wings will include an operating room, delivery room, kitchen and dining room, in addition to bedrooms and storage rooms.

Dr. George L. Hardgrave of Clarksville was honored recently for 50 years of practice in Johnson County by the Johnson County Medical Society. Dr. and Mrs. Hardgrave were presented with a sterling silver serving tray by **Dr. G. Reginald Siegel** in behalf of the Medical Society. Others present for the dinner included **Dr. and Mrs. James M. Kolb**, **Dr. and Mrs. Guy Shrigley**, **Dr. and Mrs. W. R. Scarborough**, **Dr. and Mrs. R. H. Manley**.

Dr. John H. Wilson, Magnolia, member of the Board of Trustees of Southern State College for the past 16 years, has been elevated to position of chairman. **Dr. Wilson** has practiced in Columbia County for 22 years. He is an assistant professor of surgery at the University Medical School.

Dr. Hayden H. Donahue, assistant superintendent of Arkansas State Hospital, was the speaker at the annual Bosses Night dinner of the Texarkana Business and Professional Women's Club.

Dr. James R. Callaway, a graduate of the University of Arkansas Medical School, has been awarded a \$1,000 grant for residency training at the Medical Center. The grant came from the American Academy of General Practice and Mead Johnson Laboratories of Evansville, Ind.

At the annual meeting of the Arkansas Association for Mental Health at Winrock May 5-6, **Dr. Anthony T. DePalma** of Fay-

etteville was elected regional vice president and a member of the board of directors.

Dr. Anthony T. DePalma of Fayetteville attended a meeting of the Texas Society of Plastic Surgeons in Houston on April 22nd.

Dr. H. A. Ted Bailey spoke at the National Mexican Society of Ear, Nose and Throat at their annual meeting this year in Acapulco. Dr. Bailey spoke on Recent Techniques in Ear Surgery and showed a colored movie which he made in conjunction with the Medical School which depicted one of the surgical procedures which he described. The Meeting ran from May 1 to May 4 and following this Dr. Bailey returned to Mexico City and operated at one of the local hospitals with Dr. Ruebin Minngramm who is President of the Society.

Contributors to the American Medical Education Foundation from the State of Arkansas during March 1961:

Dr. Frank Adams, Hot Springs	...\$ 5.00
Mrs. F. C. Atkinson, Hot Springs	7.50
Mrs. J. C. Baber, Little Rock	64.20
Dr. Curry B. Bradburn, Jr., L. R.	10.00
Ark. Med. Soc. Woman's Aux.	265.90
Boone County Woman's Auxiliary	15.00
Bowie-Miller County Auxiliary	25.00
Dr. Wm. H. Breit, Harrison	4.00
Dr. George Burton, El Dorado	5.00
Mrs. J. H. Chesnutt, Hot Springs	20.00
Dr. LeMon Clark, Fayetteville	25.00
Clark County Woman's Auxiliary	160.00
Dr. E. M. Cooper, Jonesboro	25.00
Craighead-Poinsett County Aux.	5.00
Dr. Austin Doren, Smackover	64.87
Dr. Milton Deneke, W. Memphis	50.00
Dr. Thomas Durham, Hot Springs	12.50
Dr. Kenneth Duzan, El Dorado	26.25
Dr. Hugh R. Edwards, Searcy	50.00
Dr. Eldon Fairley, Osceola	50.00
Dr. Julian Fairley, Osceola	50.00
Mrs. Guy Farris, Little Rock	28.00
Dr. L. G. Fincher, Sr., El Dorado	8.00
James D. Finrock, Fayetteville	10.00
Mrs. A. J. Forestiere, Harrisburg	10.00
Garland County Woman's Aux.	39.00
Joe E. Gill, Texarkana	25.00

Dr. Jean C. Gladden, Harrison	50.00
Dr. Anthony Grasse, Calico Rock	25.00
Dr. Elisha M. Gray, Mtn. Home	50.00
Dr. Edwin F. Gray, Little Rock	100.00
Dr. John T. Gray, Jonesboro	10.00
Mrs. Paul Gray, Batesville	70.00
Greene-Clay County Woman's Aux.	5.00
Dr. Walter S. Guinee, Mtn. Home	2.00
Dr. C. D. Gunter, Siloam Springs	25.00
Dr. C. L. Harris, Hope	15.00
Dr. Alfred H. Hathcock, Batesville	20.00
Mrs. M. C. Hawkins, Jr., Searcy	7.50
Dr. Robert A. Hayes, Wynne	10.00
Dr. Julius Hellums, Dumas	10.00
Hempstead County Med. Aux.	8.00
Howard-Pike Co. Woman's Aux.	5.00
Dr. J. D. Huskins, Siloam Springs	25.00
Dr. C. Lewis Hyatt, Monticello	25.00
Independence Co. Woman's Aux.	18.00
Dr. R. A. Irwin, Jr., Pine Bluff	50.00
Dr. M. A. Jackson, Little Rock	50.00
Jefferson County Woman's Aux.	10.00
Dr. O. J. Johnston, Batesville	10.00
Mrs. J. M. Kolb, Clarksville	1.88
Dr. J. F. Kelsey, Fort Smith	100.00
Mrs. Mason Lawson, Little Rock	7.50
Dr. Ruth E. Lesh, Fayetteville	25.00
M. B. Livesay, Hot Springs	3.75
Dr. C. C. Long, Ozark	10.00
Dr. D. H. Lowrey, Russellville	15.00
Dr. Stuart B. McConkie, Hot Spr.	12.50
Dr. Robert McCrary, Hot Springs	10.00
Dr. J. H. McCurry, Cash	50.00
Dr. Randolph Murphy, El Dorado	10.00
Mrs. W. L. Newton, Smackover	2.62
Dr. Joseph A. Norton, Little Rock	50.00
Mrs. Frank Padberg, Little Rock	6.75
Dr. C. W. Parkerson, Hot Springs	20.00
Dr. Carl Parkerson, Hot Springs	5.00
Phillips County Woman's Aux.	5.00
Dr. B. J. Puckett, Siloam Springs	25.00
Pulaski County Woman's Aux.	205.00
Mrs. W. S. Rainwater, El Dorado	3.75
Dr. Fount Richardson, Fayetteville	100.00
Dr. Warren S. Riley, El Dorado	33.50
A. W. Roberts, Texarkana	25.00
Dr. Guy U. Robinson, Dumas	150.00
Sebastian County Woman's Aux.	75.00
Sevier-Polk County Woman's Aux.	12.00
Dr. Friedman Sisco, Springdale	5.00
Dr. Floyd A. Smith, Jr., Trumann	10.00
Dr. Wm. A. Snodgrass, Jr., L. R.	10.00
Dr. Robert M. Stainton, L. R.	13.50
Dr. Ewell Thompson, Little Rock	10.00
Mrs. C. E. Tommy, El Dorado	10.00

Mrs. Peter Trinca, El Dorado.....	7.50
Union County Woman's Auxiliary..	57.00
Dr. H. King Wade, Jr., Hot Spr....	30.00
Dr. H. King Wade, Sr., Hot Spr....	25.00
Mrs. H. W. Ward, Fayetteville.....	1.88
Washington Co. Woman's Aux.....	10.00
Dr. V. T. Webb, Little Rock.....	10.00
Dr. Charles L. Weber, Magnolia....	10.00
White County Woman's Aux.....	5.00
Dr. Carl L. Wilson, Ft. Smith.....	50.00
Mrs. Jack Wright, Hot Springs.....	7.50
Mrs. David M. Yocum, El Dorado..	40.00
Columbia County Woman's Aux....	5.00
Dr. Milton Deneke, W. Memphis....	25.00
Franklin-Logan Co. Woman's Aux.	6.00
Dr. Edwin F. Gray, Little Rock....	100.00
Jefferson County Woman's Aux....	20.00
Johnson County Woman's Aux.....	3.00
Dr. Jim McKenzie, Hope.....	5.00
Dr. Berry Moore, El Dorado.....	2.50

\$3,103.85

Proceedings of Societies

The Craighead-Poinsett Medical Society met May 5 at the Hotel Noble in Jonesboro. Dr. W. S. Ogle, Memphis, spoke to the group on "Emergency Care and General Treatment in Acute Head Injuries." The Ladies Auxiliary met at the same time.

The Ouachita County Medical Society met in regular monthly dinner session Tuesday night, May 2, 1961 at the Camden Hotel in Camden. Dr. John M. Hundley of Little Rock spoke on "Disability Evaluation" and Mr. Bob Diles of the Workmen's Compensation Commission spoke on "The Work of the Commission." The phonograph record "Coffeecup" by Ronald Reagan was also heard by the group.

The Urological Section of the Arkansas Medical Society met in conjunction with the annual meeting of the Arkansas Medical Society on April 19, 1961, at the Grady Manning Hotel.

Dr. Frank Clark, of El Dorado, Arkansas, was elected president for the coming year.

Dr. Eugene Poutasse, from the depart-

ment of urology of the Cleveland Clinic, was the guest speaker and spoke on "Renal Hypertension" and "The Technique of Aortography."

New Members . . .

Dr. James A. Sims is a new member of the Ashley County Medical Society. He is a native of Bonita, Louisiana, and received his preliminary education at Northeast Louisiana State College. His M.D. degree was received from the Louisiana State School of Medicine at New Orleans, Louisiana, in 1959. Having completed his internship, Dr. Sims has entered general practice at Wilmot, Arkansas.

Dr. Joseph H. Poff has been accepted for membership in the Craighead-Poinsett County Medical Society. A native of McGehee, Arkansas, Dr. Poff received his preliminary education at A and M College at Monticello, Arkansas, and was graduated from the University of Arkansas School of Medicine in 1950. He practiced in Caraway, Arkansas, from 1951-55, U. S. Army 1955-57, Caruthersville and Albany, Missouri, 1957-61. Dr. Poff is a general practitioner with his office in Trumann, Arkansas.

The Jefferson County Medical Society announces that **Dr. Clement D. Burroughs** has been added to its roster of members. A native of North Little Rock, he attended the Little Rock Junior College and received his M.D. degree from the University of Arkansas Medical School in 1936. He served in the United States Navy Medical Corps from 1938-1959. Dr. Burroughs is a radiologist with his office at 1108½ Poplar in Pine Bluff.

A new member of the Jefferson County Medical Society is **Dr. Wm. Joe James**. He is a native of McAllister, Oklahoma, and received his preliminary education at the University of Arkansas from which he received a B.S. degree. He was graduated from the University of Arkansas School of Medicine in 1953. Dr. James served in-

ternship at Kansas City, Missouri, 1953-54, was a surgery resident at Little Rock 1954-55, served in the USAF 1955-57, and was a urology resident from 1957-1960. Dr. James has opened his office for the practice of urology at 1202 Cherry Street, Pine Bluff.

Dr. John F. Guenthner is a new member of the Baxter County Medical Society. He is a native of Niagara Falls, New York; he received his preliminary education at the Niagara Falls High School, and was graduated from the Kansas City College of Medicine and Surgery in 1924. Dr. Guenthner has practiced for the past twenty-four years at Mountain Home. He is a general practitioner at the Saltzman Hospital.

Woman's Auxiliary

Mrs. Mason G. Lawson, of Little Rock, past president of the Woman's Auxiliary to the American Medical Association and Arkansas Woman of the Year in 1957, was a guest of the Boone County Medical Auxiliary May 2nd. Mrs. Ulys Jackson, president of the Boone County Auxiliary, presided at the business meeting. Mrs. Lawson explained to the group the loan funds, medical scholarships and assistance programs to encourage and help prospective nurses in that area. Following the business meeting, Mrs. Lawson spoke to doctors, dentists, druggists and the hospital administrator as well as the auxiliaries. She explained the Kerr-Mills Bill and the King Bill, which was followed by a question and answer period.

The newly-formed Auxiliary to Saline County Medical Society met for a regular meeting at Saline Memorial Hospital, April 24. The meeting began with dinner with the Medical Society. Mrs. John D. Wright, president, was in charge of the business meeting. Plans were made to discuss and approve the new constitution and by-laws.

The program for the meeting was a discussion of the Cancer Society of Saline

County by Mrs. Merl Bragg. She told of the present work and the ways in which the Medical Auxiliary could assist in the work.

Recently installed as the new officers of the Women's Auxiliary to the Jefferson County Medical Society are: Mrs. B. H. Cheek, president; Mrs. R. E. Glasscock, president-elect; Mrs. M. R. Wirthlin, historian; Mrs. W. P. Meredith, vice president; Mrs. J. R. Pierce, parliamentarian; Mrs. William J. James, secretary; and Mrs. V. Bryan Perry, treasurer.

The auxiliary's big project of the year is its annual Fashion Show-Tea for the benefit of the Charity Fund of Jefferson Hospital. A check for \$1,194, the proceeds of this year's show was given to the hospital recently.

Officers of the Auxiliary to the Union County Medical Society for 1961-62 were installed with impressive ceremony by Mrs. Mason Lawson, parliamentarian of the Woman's Auxiliary to the American Medical Association. The ceremony took place in the home of Dr. and Mrs. Berry L. Moore, El Dorado. New officers are Mrs. Berry L. Moore, Jr., president; Mrs. Gwynn Fincher, Jr., president-elect; Mrs. Frank Thibault, vice president; Mrs. Garland Murphy, Jr., secretary; Mrs. Moore, Sr., treasurer; and Mrs. Warren S. Riley, historian.

Mrs. Ben A. Lincoln of Little Rock, who was chosen Arkansas Mother of 1961, was sponsored by the Pulaski County Medical Society.

Medical Career Day was observed in several southeastern Arkansas high schools this spring. The Arkansas Medical Society and the Women's Auxiliary sponsored the observance. Programs were conducted in McGehee by Dr. Swan B. Moss; in Dumas under the direction of Dr. Guy Robinson; in Dermott by Dr. Major Smith; in Monticello by Dr. Lewis Hyatt, and in Eudora by Dr. Byron Binns.

Mrs. Mason Lawson and Mrs. Hershel Wilmoth were special guests at the May meeting of the Independence County Med-

ical Society and Auxiliary, in Batesville on May 9.

Mrs. Lawson, who is now serving as a consultant to the Division of Field Service of the American Medical Association, spoke to the entire group about the benefits of the Kerr-Mills Law for the medical care of the aged.

Mrs. Wilmoth spoke to the auxiliary, presenting her plans for the year. This was her first official visit to a county auxiliary.

Book Reviews

Ciba Foundation Symposium on CELLULAR ASPECTS OF IMMUNITY, edited by G. E. W. Wolstenholme, O.B.E., M.A., M.B., B. Ch. and Cecilia M. O'Connor, B.Sc., pp. 495, illustrated, published by Little, Brown & Company, Boston, Massachusetts, 1960.

This symposium on the Cellular Aspects of Immunity is most important. New tools enable us to have wider and deeper understanding of many biological processes. The studies on immunity have been going on for many years; electron microscopy and newer chemical techniques have enabled the research teams to make discoveries heretofore impossible. Some of the things discussed in this excellent symposium are microcinematography study of plasma cells, the ultrastructure of antibody-producing cells, the mechanisms of antigen uptake by cells, etc. This book is keyed at research level but there is much in it of interest to the internist and there is some of interest to all practicing physicians and medical students. As is so often the case in these books, the final discussions after the presentation are extremely good. This book is highly recommended to all internists and to students in the field of bacteriology and immunology.

AK

THE HAND. A manual and Atlas for the General Surgeon. By Henry C. Marble, M.D., F.A.C.S., Consulting Surgeon to the Massachusetts General Hospital. Illustrated. pp. 197. Published by W. B. Saunders Company, Philadelphia and London, 1961.

This manual of treatment of the hands is a well written important book by a qualified authority. It takes its place with Kanavel's book and others. It is heartily recommended to the general surgeon. It is an important book because injuries to the hand often reduce a wage earner to the rolls of the unemployed. This book is condensed and consists of only 197 pages. It is well illustrated but not profusely illustrated. Its only flaw is a complete absence of references. AK

Letters to the Editor

Dr. W. R. Brooksher
318 North Greenwood
Fort Smith, Arkansas
Dear Dr. Brooksher:

The Council of the Arkansas Medical Society wishes to thank you for the unusually successful achievement of the goals of the Senior Medical Day program initiated by you and carried out under your direction through 1960.

Your program, given for senior medical students and their wives, emphasized and brought alive the Medical Code of Ethics. It brought out the advantages of practicing medicine in rural areas, encouraged the general practice of medicine and pointed up the desirability of active participation in organized medicine at local, state and national levels. All this was accomplished with the directness, simplicity and economy characteristic of your many contributions to medicine and the public it serves.

Very truly yours,
Joe Verser, M.D.
Chairman

Dr. Alfred Kahn, Editor
Arkansas Medical Journal
6th and Pulaski Streets
Little Rock, Arkansas

Dear Dr. Kahn:

During the past few years, it has become evident that administration of the Workmen's Compensation Law has resulted in certain alterations in the longstanding doctor-patient and doctor-doctor relationships. As the Law is currently interpreted, the insurance carrier or his representative is free to transfer any patient from any physician to any other physician as he may so desire. Neither the physician nor the patient have any recourse beyond the "vested financial interest" of the carrier under the present Workmen's Compensation Commission. Fortunately, this authority is not exercised by most of the responsible carriers. However, as most physicians know without just reasons, patients are transferred at the discretion of insurance adjusters. In an effort to determine unequivocally the rights of the physician and the laboring man under the present Workmen's Compensation Commission on April 20, 1961 I wrote to the Commission as follows, stating what I thought to be the proper interpretation of the Workmen's Compensation Act.

"As Mr. Cowne may recall, on April 7, 1961, I called the Commission to learn first hand their opinion regarding the right of the injured workman to select the treating physician in the event his injury is accepted under the Workmen's Compensation Act. I understood Mr. Cowne to state that "it was his and the Commission's opinion that the WCC Act gives the carrier the right to choose the treating physician." I further inquired

as to whether he expressed an assumed attitude of the present commission or whether this question had been resolved by the Arkansas Supreme Court. I understood Mr. Cowne to say that it had been ruled on by the Arkansas Supreme Court and that they had resolved the question in favor of the carrier. At my request, he agreed to furnish me with reference to this ruling case in order that it might clarify my thinking on this issue so vital to the working men and to the doctors of Arkansas. To date, I have not received this reference from Mr. Cowne.

I do, however, have a copy of Mr. Cowne's letter of April 12, 1961, to Mr. James A. Pate with Aetna in which Mr. Cowne re-affirms his opinion that the carrier has the right to choose the treating physician and refers to Section II of the WCC Act. Careful reading of this section of the law reveals the following sentences which may be germane:

"The Commission may order a change of physicians at the expense of the employer when, in its discretion, such change is deemed necessary or desirable."

The above sentence would seem to extend this privilege to the Commission after an injury has been accepted as a WCC case, but not while the liability is being controverted. Otherwise, the Commission may find itself in the position of having ordered a change in treating physician in a non-compensation case. The Commission could, for reasonable reasons, order a change in treating physicians in any case accepted under the Act! There is nothing to suggest that the Commission has the right to transfer its authority to an insurance adjustor whose job it is to save his employer money. Secondly:

"An injured employee claiming to be entitled to compensation shall submit to such physical examination and treatment by a qualified physician designated or approved by the Commission as the Commission may from time to time require." Once again, a privilege is extended to the Commission and nothing suggests that the Commission can transfer this authority to an insurance adjustor. But to review further:

"The employer shall promptly provide for an injured employee such medical, surgical, hospital and nursing services, and medicine, crutches, artificial limbs and other apparatus as may be necessary . . ."

Again, no mention is made of the carrier or insurance adjustor—the employer's agent for claims adjustment and not for medical recommendations. Careful consideration of the above sentence in no way suggests that a fundamental right, heretofore enjoyed by all Americans, including the laboring man, of freedom of choice of his treating physician be abrogated and give to the carrier. It would seem that the legislature intended to leave this right the way it has always been. "Provide" must mean to make available, but not to dictate.

In no way is this interpretation of the law in conflict with the concept of a company physician who is available for the convenience of the company, the employees, and himself. Experience

shows that this physician is acceptable to almost all employees in most instances. However, in those rare cases where the employee-patient desires to be treated by another physician, does not he still have that right as an American and an Arkansan? Those doctors employed by companies with whom I have discussed this problem also feel that the employee does have the right to choose his physician if he so desires.

But on what basis does the Commission, according to their Secretary, conclude that the respondent can assume the employee's right to select the treating physician? To quote from Mr. Cowne's letter to Mr. Pate: ". . . with this requirement of furnishing competent medical treatment, goes the right of selecting the doctor. The Commission bases this on the fact that the respondents have vested interest in seeing that the claimant is furnished with competent medical treatment and without the right to select the doctor might, in some cases, prolong and increase the liability of respondents. It is very much the respondents' interest to see that a claimant is receiving proper medical treatment."

Is the respondent's vested financial interest to transcend the patient's physical and financial interest?

Is the doctor-patient relationship which existed long before the WCC Law was enacted to exist no longer for the working man?

Must the doctor-doctor relationship, which also existed for a long time before the WCC Law, be scrapped? When a carrier, as is on record, removes a patient from the care of one physician and places him under the care of another physician, who must either cooperate with the carrier or also find his relationship with the carrier strained, doctor-doctor relationships suffer.

Must we then conclude that these longstanding basic relationships are superseded under the guise: "It is very much to the respondent's interest to see that a claimant is receiving proper medical treatment." What is "proper"? What is proper for the carrier may or may not be what is proper for the patient. The carrier may favor the physician who can find little wrong with the patient and whose disability awards are usually low, while the patient may consider the doctor who can diagnose his injury and render treatment, notwithstanding the expense, the more proper physician. Thus, there would seem to be a conflict of interest as regards "proper".

While few physicians would claim that the medical profession is above error, experience shows that the patient's interest is best served by leaving treatment to the physician of the patient's choice. Claim adjusting should, of course, be left to claim adjustors.

Clearly, there is nothing in Section II which would permit claim adjustors to dictate the choice of the treating physician. To extend him this privilege, one must assume that the vested financial interest of the carrier supersedes all the aforementioned rights of the laboring man and of the physician. Also, one would have to conclude that the Arkansas legislature intended to deprive the working man of his choice of treating physician

and to deprive the **treating** physician of his prerogative to remain impartial to the litigants' dispute. If that were so, no longer could he continue to treat under the time honored doctor-patient relationship. With the adjustor choosing the **treating** physician, the doctor would be forced to cooperate with the carrier to the extent demanded or to have his practice curtailed by an agent of the carrier free to, though unqualified to, determine what is "proper" medical treatment.

Is it the opinion of the Commission, in consideration of the foregoing, that the carrier has the right in any case without taking their grievance in that case before the Commission for a ruling to order a change in **treating** physician or to withhold compensation benefit to a workman who chooses not to have his physician chosen for him by the adjustor?

Does the Commission recognize that it would be necessary for the **treating** physician under such a system either to cooperate fully with the respondent or to limit his practice? Either of which, in my opinion, is not to be the best interest of the working man.

Has this issue already been referred to the Arkansas State Supreme Court as suggested by Mr. Cowne? If so, please provide me with the case reference.

It is humbly requested that the full commission in light of the above consideration review the opinion expressed by Mr. Cowne to Mr. Pate.

In closing, as one physician sees the law, the carrier has the right to expect the **treating** physician to be ethically and professionally qualified. The carrier should have a right to be kept informed as progress of the treatment dictates. He has a right to request consultation in any case, and in addition, he has a right to appeal to the Commission any alleged grievances against any physician, professional or financial. I do not believe that the Legislature of the State of Arkansas ever intended to deprive the working man of his right of choice of **treating** physician.

If the Commission cannot see the obvious error in any system that would so restrict the freedom of the working man and the physician, then the question must be referred to the Arkansas Supreme Court for resolution."

The full Commission was kind enough to reply to my inquiry on April 24, 1961 as follows:

"This is to acknowledge receipt of your letter dated April 20, 1961, addressed to this Commission.

Section II of the Workmen's Compensation Law states:

"The employer shall promptly provide for an injured employee such medical, surgical, hospital and nursing services, and medicine, crutches, artificial limbs and other apparatus as may be necessary during the period of six months after the injury, or for such time in excess thereof as the Commission, in its discretion, may require. If the employer fails to provide the services or things mentioned in the forgoing sentence within a reasonable time after knowledge of the injury, the Commission may direct that the injured employee obtain such service or thing

at the expense of the employer, and any emergency treatment afforded the injured employee shall be at the expense of the employer. All persons who render services or provide things mentioned herein shall submit the reasonableness of the charges to the Commission for its approval, and when so approved, shall be enforceable by the Commission in the same manner as is provided for the enforcement of compensation payments; but the foregoing provisions relating to charges shall not apply where a written contract exists between the employer and the person who renders such service or furnishes such things. The Commission may order a change of physicians at the expense of the employer when, in its discretion, such change is deemed necessary or desirable. The employer shall not be liable for any of the payments provided for in this section in case of a contest of liability, where the Commission shall decide that the injury does not come within the provisions of the Act. An injured employee claiming to be entitled to compensation shall submit to such physical examination and treatment by a qualified physician designated or approved by the commission, as the Commission may from time to time require. The place or places of examination and treatment shall be reasonably convenient for the employee. Such physician or physicians as the employee, employer, or insurance carrier may select and pay for may participate in the examination, if the employee, employer, or insurance carrier so requests. In cases where the Commission directs examination or treatment, proceedings shall be suspended and no compensation shall be payable for any period during which the employee refuses to submit to examination and treatment or otherwise obstructs same. Failure of the employee to obey the order of the Commission in respect to examination or treatment for a period of one year from the date of the suspension of compensation shall bar the right of the claimant to further compensation in respect to the injury. Except in cases of hernia [which are specifically covered by section 13 (e)], where an injured person unreasonably refuses to submit to a surgical operation which has been advised by at least two (2) qualified physicians and where such recommended operation does not reasonably involve risk of life or additional serious physical impairment the Commission may, in fixing the amount of compensation, take into consideration such refusal to submit to the advised operation."

Section 37 of the Workmen's Compensation Law is as follows:

"In any case where the employer is not a self-insurer, in order that the liability for compensation imposed by this Act may be most effectively discharged by the employer, and in order that the administration of this Act in respect of such liability may be facilitated, the Commission shall by regulation provide for the discharge by the carrier, for such employer, of such obligations and duties of the employer in respect of such liability, imposed by this Act upon

the employer, as it considers proper in order to effectuate the provisions of this Act. For such purpose (1) notice to or knowledge of an employer of the occurrence of the injury shall be notice to or knowledge of the carrier; (2) jurisdiction over the employer by the Commission or by any Court under this Act shall be jurisdiction over the carrier; and (3) any requirements by the Commission or any Court under any compensation order, finding or decision shall be binding upon the carrier in the same manner and to the same extent as upon the employer."

In construing the Workmen's Compensation Law, it is now and has been for many years the opinion of this Commission that respondents (employer or insurance carrier) has the duty to provide an injured employee with prompt competent medical attention and that respondents have the right to select the doctor or doctors to administer such treatment because the liability is one which must be borne by respondents; further, also, because in the event additional disability results because of such medical treatment respondents are also liable for same. If respondents neglect or refuse to provide said medical attention or controvert claimant's right to such attention, the claimant is then free to seek his own treatment which will be the respondents' expense if such treatment is found by the Commission to be for a compensable accidental injury.

The foregoing statement briefly outlines this Commission's holdings over a period of many years and is in keeping, in our opinion, with the provisions of the Workmen's Compensation Law."

If I have interpreted this reply correctly, it would seem that the Workmen's Compensation Commission is of the opinion that the "vested financial interest of the carrier" supersedes the physical and psychological interest of the injured workman and the free practice interest of the physician.

This may be as it should be. It has occurred to me, however, that each physician and each working man would wish to answer this question for himself.

What should your (physician or workman) rights under the Workmen's Compensation Law be as regards choice of the treating physician?

Sincerely yours,
Kenneth G. Jones, M.D.

To: Members of the Independence County Medical Society
Dear Doctors:

We received from the AMA Headquarters and the Arkansas Medical Society Headquarters a copy of a record of radio "spot announcements" regarding the King-Anderson Bill and the Mills-Kerr Bill. Of course, as you know, we favor the Mills-Kerr Bill.

As the AFL-CIO has a man and woman team in our Congressional District, it was suggested by the AMA and the State Headquarters that we use these spot announcements in this District.

The AMA has agreed to put up one-half the cost of the announcements which amounts to

\$28.00 for 20 announcements a week. That is, we pay \$14.00 and they pay \$14.00. It is extremely important that we start these next week because the next week the hearings on the King-Anderson Bill by the House Ways and Means Committee will occur. As your President, I have taken the liberty, after consultation with others, in authorizing this small amount of money to be spent. Dr. Monfort has also gotten Searcy, Newport, and possibly Pocahontas covered through their doctors, and their radio stations for the same announcements.

With the best of personal wishes, I am

Sincerely yours,

Chaney W. Taylor, M.D.

President

Independence County Medical Society

CWT:plp

Dr. Alfred Kahn, Jr., Editor

Journal of the Arkansas Medical Society

1300 West 6th Street

Little Rock, Arkansas

Dear Dr. Kahn:

At a recent meeting of the Arkansas Psychiatric Society it was unanimously voted to ask that you consider the publication in the State Medical Journal of the following "statement of position by the American Psychiatric Association regarding hypnosis".

The society asked that I send this to you with this recommendation that you consider this.

Sincerely yours,

W. Payton Kolb, M.D.

WPK:je

REGARDING HYPNOSIS

A Statement of Position by the American Psychiatric Association*

February 15, 1961

* * * * *

Many inquiries requesting an official opinion of the American Psychiatric Association on hypnotic therapy have been received from local psychiatric and other medical societies and from individual members of the Association and others. These inquiries, in general, ask the following questions: Is hypnosis an acceptable psychiatric procedure? If so, who should teach it? To whom should it be taught? What should be the depth and extent of such teaching? Where can adequate training be secured?

The following statement of position regarding these matters has been prepared by the Committee on Therapy of the American Psychiatric Association and is published with the approval of the Council of the Association for the information and guidance of all concerned.

*Additional copies of this statement are available on request from the Central Office of the Association, Mathew Ross, M.D., Medical Director, 1700 18th Street, N.W., Washington 9, D.C.

STATEMENT

Hypnosis is a specialized psychiatric procedure and as such is an aspect of doctor-patient relationship. Hypnosis provides an adjunct to research, to diagnosis and to treatment in psychiatric practice. It is also of some value in other

areas of medical practice and research.

Unfortunately, so little is known of the nature of the hypnotic state that definitions usually reduce themselves to mere descriptions of the various manifested phenomena. Few reports of controlled experiments into the nature of hypnosis have been published.

Hypnosis is appropriately and properly used in the course of therapy only when its employment serves therapeutic goals without posing undue risks to the patient. With selected patients, it can be used for sedative, analgesic and anesthetic purposes; for the relief of apprehension and anxiety; and for symptom suppression. It can also be used, but on a still more highly selective basis, as an adjunct in the treatment of patients with neurotic or psychotic illness.

Hypnosis or hypnotic treatment, as in any other psychiatric procedure, calls for all examinations necessary to a proper diagnosis and to the formulation of the immediate therapeutic needs of the patient. The technique of induction of the trance state is by far the least important of the many facets of the hypnotic procedure and under no circumstance should it be taught independently.

Whoever makes use of hypnotic techniques, therefore, should have sufficient knowledge of psychiatry, and particularly psychodynamics, to avoid its use in clinical situations where it is contraindicated or even dangerous. Although similar dangers attend the improper or inept use of all other aspects of the doctor-patient relationship, the nature of hypnosis renders its inappropriate use particularly hazardous. For hypnosis to be used safely, even for the relief of pain or for sedation, more than a superficial knowledge of the dynamics of human motivation is essential.

Since hypnosis has definite application in the various fields of medicine, physicians have recently shown increasing interest in hypnosis and have turned to psychiatrists for training in hypnosis.

To be adequate for medical purposes, all courses in hypnosis should be given in conjunction with recognized medical teaching institutions or teaching hospitals, under the auspices of the department of psychiatry and in collaboration with those other departments which are similarly interested. Although lectures, demonstrations, seminars, conferences and discussions are helpful, the basic learning experience must derive from closely supervised clinical contact with patients. Since such psychiatrically-centered courses are virtually nonexistent, many physicians have enrolled in the inadequate brief courses available, which are taught often by individuals without medical or psychiatric training. These courses have concentrated on hypnotic-trance techniques and have neglected or covered psychodynamics and psychopathology in a superficial or stereotyped fashion.

Proper safeguards for the use of hypnosis are vitally important to the patient, to all physicians, and to psychiatry as a specialty. In the interest of encouraging the safe use of hypnosis, the following recommendations are approved.

RECOMMENDATIONS

1. Isolated courses limited to the teaching of trance induction techniques are strongly disapproved.
2. The teaching of hypnosis should take place in medical schools and other psychiatric training centers that have an interest in the teaching of hypnosis. When taught in such a climate, where students can acquire adequate knowledge of psychiatric principles, hypnosis may become a useful adjunct to therapy.
3. The teaching of hypnosis should be of sufficient duration and depth for students to acquire adequate understanding of its appropriate place in relation to other psychiatric treatment modalities; of its indications and contraindications; of its values and its dangers. Decisions regarding the depth and extent of the teaching of hypnosis should remain flexible, and should be made by the psychiatric departments teaching such courses.
4. Training in all aspects of hypnosis should be made available to physicians and dentists requesting it.
5. An expansion of facilities for the teaching of hypnosis is needed particularly at the postgraduate level. The establishment of postgraduate courses in medical schools and other teaching centers under the direction of the department of psychiatry is recommended.
6. Physicians practicing hypnosis should do so only in their particular field of medical competence.
7. The need for continued study of hypnosis and for adequate research is emphasized, with particular reference to delineating its place in the total treatment program.

ANSWER TO

WHAT'S YOUR DIAGNOSIS?

CLINICAL DATA:

1-day-old white male. Premature infant with immediate post-delivery respiratory difficulty.

ANSWER—Congenital diaphragmatic hernia

X-RAY FEATURES: The initial film shows complete opacification of the left chest with displacement of the heart and mediastinum toward the right. Subsequent films show gas-filled bowel in the left upper abdomen and the left chest. There was no air in the bowel on the initial film.

THE
JOURNAL
OF THE
ARKANSAS MEDICAL
SOCIETY

August, 1961

Vol. 58 No. 3

FORT SMITH, ARKANSAS

U.C. MEDICAL CENTER LIBRARY

AUG 22 1961

San Francisco, 22

what does
high "ABA"
mean to you?

High serum levels of antibacterial activity mean fewer treatment failures in severe infections or in infections only marginally sensitive to penicillin. In other words, high "ABA" means . . .

consistently dependable clinical results



V-CILLIN K[®]

(penicillin V potassium, Lilly)

produces antibacterial activity in the serum against penicillin-sensitive pathogens which is unsurpassed by any other form of oral penicillin and is less affected by the presence of food in the stomach.

Now at lower cost to your patient



when allergy looms large in the life of your patient...

BENADRYL Hydrochloride (diphenhydramine hydrochloride, Parke-Davis) is available in a variety of forms including: Kapseals® of 50 mg.; Capsules of 25 mg.; Emplets® (enteric-coated tablets) of 50 mg.; in aqueous solutions: 1-cc. Ampoules, 50 mg. per cc.; 10- and 30-cc. Steri-Vials®, 10 mg. per cc.; Elixir, 10 mg. per 4 cc.; 2% Ointment (water-miscible base); Kapseals of 50 mg. BENADRYL Hydrochloride with 25 mg. ephedrine sulfate. *Precautions:* Avoid subcutaneous or perivascular injection. Single parenteral dosage greater than 100 mg. should be avoided, particularly in hypertension and cardiac disease. Products containing BENADRYL should be used cautiously with hypnotics or other sedatives; if atropine-like effects are undesirable; or if the patient engages in activities requiring alertness or rapid, accurate response.

relieves the symptoms of seasonal allergy

What may be insignificant undergrowth to some, can seem to engulf others who suffer from weed-pollen allergy. For such patients, BENADRYL provides a twofold therapeutic approach to the management of distressing symptoms.

antihistaminic action A potent antihistaminic, BENADRYL breaks the cycle of allergic response, thereby relieving nasal congestion, sneezing, lacrimation, and pruritus.

antispasmodic action Because of its inherent atropine-like properties, BENADRYL affords concurrent relief of bronchial and gastrointestinal spasm.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

BENADRYL[®]
antihistaminic-antispasmodic
**CUTS MOST
ALLERGENS
DOWN
TO
SIZE**

THE *Journal* OF THE *Arkansas* *Medical Society*

Owned by
THE ARKANSAS MEDICAL SOCIETY
And Published Under Direction of the Council

ALFRED KAHN, JR., M.D., Editor
1300 West Sixth Street Little Rock, Arkansas
MR. PAUL C. SCHAEFER, Business Manager
218 Kelley Bldg. Fort Smith, Arkansas
LITTLE ROCK BUSINESS OFFICE
114 E. Second St. Little Rock, Arkansas

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY
WM. A. SNODGRASS, JR.—President Little Rock
H. KING WADE, JR., President-Elect Hot Springs
M. E. BLANTON, First Vice-President Jonesboro
CHARLES W. REID, Second Vice-President Pine Bluff
L. E. DREWREY, Third Vice-President Camden
H. ELVIN SHUFFIELD, Secretary Little Rock
W. R. BROOKSHER, Secretary Emeritus Fort Smith
BEN N. SALTZMAN, Treasurer Mountain Home
C. LEWIS HYATT, Speaker, House of Delegates, Monticello
J. P. PRICE, JR., Vice Speaker,
House of Delegates Monticello
MR. PAUL C. SCHAEFER, Executive Secretary,
P. O. Box 1345 Fort Smith

COUNCILORS

First District	JOE VERSER	Harrisburg
	ELDON FAIRLEY	Osceola
Second District	HUGH R. EDWARDS	Searcy
	PAUL GRAY	Batesville
Third District	K. E. BEATON	Wynne
	FRED B. STONE	Stuttgart
Fourth District	H. W. THOMAS	Dermott
	T. E. TOWNSEND	Pine Bluff
Fifth District	J. L. DEDMAN	Camden
	GEORGE C. BURTON	El Dorado
Sixth District	JOHN P. WOOD	Mena
	KARLTON H. KEMP	Texarkana
Seventh District	MARTIN EISELE	Hot Springs
	J. W. KENNEDY	Arkadelphia
Eighth District	ROBERT D. JONES	Little Rock
	BILL DAVE STEWART	Little Rock
Ninth District	ROSS FOWLER	Harrison
	STANLEY APPLGATE	Springdale
Tenth District	L. A. WHITTAKER	Fort Smith
	C. C. LONG	Ozark

The Advertising policy of this JOURNAL is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

EXCLUSIVE PUBLICATION — Articles are accepted for publication on the condition that they are contributed solely to this JOURNAL.

COPYRIGHT 1961—By The JOURNAL of the Arkansas Medical Society.

NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to the membership.

● SCIENTIFIC ARTICLES

The Utilization of
Psychiatric Principles in
General Practice 83
T. A. Watters, M.D.

The Eleventh Hour 87
Chester Lauck

The Diagnosis of Strabismus 90
James E. Miller, M.D.

North by West 94
John P. Morrow, Jr.

● WHAT'S NEW

Spinal Cord Injuries and
Paraplegia 102
William L. Steele, M.D.

● TEACHING SEMINAR

A Case of Pseudo-
Pseudohypopara-
thyroidism 106
James L. Stecher, M.D.

● FEATURES

What Is Your Diagnosis 111

Public Health at a Glance 112

Resolutions 113

Editorial

Tired Blood 114
Alfred Kahn, Jr., M.D.

The Care of the Patient 115
*Reprint from The New England
Journal of Medicine—
March 30, 1961*

Medicine in the News 116

Announcements 120

Obituary 121

Personal and News Items 122

Proceedings of Societies 123

New Members 125

Woman's Auxiliary 125

Book Reviews 126

Erratum 126

Notice on Form 3579-P to be sent to Arkansas Medical Society, 218 Kelley Building, Fort Smith, Arkansas. Published monthly under direction of the Council, Arkansas Medical Society, Vol. 58, No. 3. Subscriptions \$3.00 a year. Single copies 50 cents. Entered as a second class matter, May 1, 1955, at the post office at Little Rock, Arkansas, under the Act of Congress of March, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 1, 1918. Second-class postage paid at Little Rock, Arkansas.

The JOURNAL

OF THE ARKANSAS MEDICAL SOCIETY

PUBLISHED MONTHLY UNDER DIRECTION OF THE COUNCIL

Volume 58

AUGUST, 1961

Number 3

The Utilization of Psychiatric Principles In General Practice*

T. A. WATTERS, M.D.**

Certain principles in medical practice are psychiatric in nature and have been used in the practice of medicine for centuries. Some are so obvious they are not fully appreciated, yet psychiatry has focused upon them and refined them into precision tools. Significant ones center in the area of interpersonal relationships, especially the working relationship between patient and physician; that between the patient and his family, and finally the relationship between the family and the physician.

Other principles are involved in the physician's own attitude towards the patient; towards the patient's illness per se, especially when evident emotional factors are at work; towards the problems lurking behind the person's anxiety and stress; towards his family. All of these are caught up in the prospects of therapy and its outcome.

Illness is never the simple matter that some physicians would like to believe, for the reason that emotional factors are always a part of the picture. It is in dealing with these that some appreciation, understanding and informed application of psychiatric principles round out therapy into its most effective dimensions.

Relationship between patient and physician may be considered a bridge to therapy, at one end is the physician and at the other end is the patient. The patient seeks help for his illness, while the physician is motivated and trained to give help to the one who is ill. But, each must have

the attitude appropriate to his respective role for the best results to accrue. Certainly the physician must be more than just scientific, for unless he is human in his approach, he will be lacking in a basic essential. As a person he must be benevolent, yet never patronizing nor condescending; tolerant, not moralistic nor judgmental. As a physician, his attitude must be one of objective neutrality imbued with empathetic understanding of the suffering and sick person. A golden mean between gushing joviality and cold detachment will set in motion a healthy working relationship.

The physician, too, will understand that his own personality is the most important ingredient in his therapy: a personality with free working composure and feeling pitch that maintains rapport with the doctor in the lead. He will not too easily become threatened or seduced into compliance with the patient's own ideas of how treatment is to be carried out. The physician will be mindful as well that his non-verbal behavior can be far more eloquent than what is put into words, remembering constantly that distressed people are intuitive, supersensitive, and often react unfavorably to an inadvertent lift of the eyebrow or twitch of the mouth that is all too revealing. Personal conflicts too often can filter through such non-verbal behavior to disturb not only a patient's response to the physician as a person, but to his therapy as well. The doctor who has some knowledge of his own personality will be more assured of comfortable composure in communion with his patients.

*Presented at the Arkansas Academy of General Practice, Regional Postgraduate Seminar, at Monticello, Arkansas, March 24, 1960.

**429 Iona Street, Metairie, Louisiana.

The relationship releases forces both inimical and favorable to healing, which materially affect the future and fate of the patient. Its recognition and its discreet management are basic principles in the treatment of any kind of illness today. It is expertly handled by many doctors fortunate in sensing intuitively their patients' reception and responses to them. This sixth sense, however, can be further refined through training and supervised experience. Thus a doctor today has ready opportunities to enhance his know-how in this specific area of personal therapeutic function. Such experience will increase his grasp of human emotions with all their nuances and subtleties, how they bear upon the dynamics of getting sick, and upon getting well. He will more effectively perceive the quiet desperation underlying more superficial attitudes and feelings displayed by a calm, cooperative but anxiety-ridden person. People prosper or fail, live zestfully, or numbly endure their lot. Too frequently they fall into ill health as a mute cry for help and survival, often losing hope, becoming disorganized, and dying.

The patient-physician relationship as a meaningful concept constitutes one of the valuable contributions psychiatry has made to the medical profession. It is by no means an empty phrase—but a highly dynamic, mutual assistance pact carried out preponderantly between two human beings, however, subject also to the effects of other persons in the patient's life.

A principle to remember is that sickness and handicap always mobilize regression and dependency. Thus, not far beneath the adult seeking help from the doctor is the anxious and frightened child. In the role of seeking help, the first thing one does is to reach out for someone to lend guidance and assistance. By tradition, this role is the doctor's. His is that of a knowing, protecting, succoring person reminiscent of the mother organism of this person's childhood.

Accordingly, when one becomes ill, it is a rule that one shows repetitions of behavior patterns displayed when the same person was sick some time earlier in his life as a child. A discerning ear at this point may pick up a precise description of how this person was treated many

years previously, perhaps by another doctor. This often is the secret to the patient's lack of response to the present doctor, because he may well have been mis-managed previously, or been caught in a coalition between his parents and the doctor, wherein the doctor was used either as a disciplining or punitive person. The previous doctor may have been more frightening than he realized. The point is one's past comes into the picture when one gets sick, so that a clinician always deals with both, and, naturally, the future comes in as well.

Thus the doctor must understand both the psychology of the sick person as well as the psychology of this person when he is well. Also, he must know the circumstances of this particular illness and the parts played by other members in the family constellation. One rarely gets sick alone, and rarely gets well alone, because each person lives in a climate of interpersonal feelings colored by dominant patterns and rivalries. Some of these are fierce, at times relatively dormant, other times rather openly expressive, if someone looks well for them.

Since the doctor comes into any clinical picture by reason of symptoms of some particular disease or disorder, he automatically has assumed the help-giving role. He cannot separate the disorder from the person, whether it be organic, functional or a blend; nor can he separate the person from his family and their mutual attitudes and feelings. Too frequently the course of convalescence or treatment is materially slowed by, or even tripped up by, secret ingredients contributed either by the patient, his family, or even the physician. Particularly is this true when the latter has failed to see his role being manipulated as a mediator between two warring factions. This is not infrequent. Principles of genuine doctoring will maintain this working relationship at an effective therapeutic level. Once instituted, it must be maintained until the sick person has recovered and becomes, to his fullest capacity, a self-determined, healthy person again. This dynamic equation of the help-seeking patient and the help-giving physician is particularly catalyzed by each party sincerely and faithfully playing his respective role: the physician earnestly showing by word

and deed that he not only wishes the patient to get well, but honestly cares for the patient while he is getting well. This concern is picked up by the patient.

Another necessary ingredient to catalyze the recovery process is the practical use of hope coming out of the doctor's own evaluation of the patient's life situation with respect to those from whom he expects love and understanding.*

At this point, it is quite expedient that the doctor know well what the patient means to convey by the words "help," "hope" and "care." They may vary from person to person and may constitute expectations which the doctor may be doubtful of fulfilling.

The physician will not tactlessly intrude into the patient's private history nor be untimely inquisitive—for the seeking of a premature revelation may mar their course of action. In hastily moving things along, the frustrated physician is trying to do too much for too many, and may falsely reassure the patient. Instead, the patient will seek for an untroubled, unhurried and unharried listener; a double frustration, disappointment with intensification of symptoms. The Doctor should so arrange his time adequately to put forth his own personality.*

Questioning and history-taking is not an art. Rather, it is an old procedure in medicine that has been preserved and polished by psychiatry and really boils down to tact, timeliness and simply encouraging a person to tell his story at his own pace.

In addition to the principles previously mentioned, there are skills and techniques that must be emphasized. The first is that of listening with an attentive facility to hear what is *not* said, as well as what is said. It is well to emphasize that one cannot talk and listen at the same time. Too frequently the listener himself wants to be heard. He is too easily given to surrendering the help-giving role for the help-seeking role: he seizes the patient's prerogative to be heard and listened to calmly and quietly while telling his own story of the symptom picture and how it began.

Among those physicians who do not practice listening, are doctors who talk so much about themselves that they do not give the patient an opportunity to ventilate his troubles, problems and tensions.

Such physicians too frequently are disturbed by illness and might do well to find out something about the psychology of being sick themselves.

Questioning, as mentioned earlier, must always be tactful and timely. One does not question out of the context of the material and the story that the patient is giving. It is not only frustrating to the patient, but is too often the doctor's response to the material the patient is giving as it affects the doctor. Thus he questions in order to stop the material that is coming out, rather than encouraging the patient to continue. Such a doctor will be considered inquisitive to begin with, too intrusive to end with, and worst of all, his questions will frighten the patient. A court atmosphere is out of place in the quietness of the physician's office. A patient is not on trial.

Another technique is "focusing" on the prevailing problem. One must hold to this, otherwise he can be led astray too easily and become confused. Thus the physician will fail to see the forest for the trees, or the contrary, the trees for the forest. This is particularly true if he is working with patients with prevalently emotional disorders. By focusing he will sharpen his discernment as well as his judgment; will more readily muster the treatment that will be appropriate in a given case, and decide whether the patient will be referred or not to a specialist. The physician must know what he is doing, and why. He can do this better by listening more, and talking less. He, too, must know his own limitations—how far he can proceed with certain types of patients with emotional disorders, particularly when it means getting caught up in an identification with the patient whose troubles may be similar to the doctor's own at that time.

The physician must be familiar with current techniques. New drugs, shock treatment, hypnosis, all come into the picture. One may be tempted to use them as short-cuts, time-savers and particularly in an effort on the physician's part to reduce his own frustration. But these short cuts may not prove to be short in the end. They may complicate the whole system of troubles lying behind the patient's symptoms. Humility is not out of fashion, and

the physician must remember to give credit to the patient's own will to recover. Many powers enter into healing. We do not know as much about some as we would think.

The astute physician knows when to stop even benevolent interference and let nature aided by rest, nourishment, and peaceful surroundings work her own magic for the patient. He maintains the patient's will to recover at a constant pitch through psychological means transmitted through a good working relationship with the patient.

The day is past when an illness can be evaluated and treated alone and unto itself. It is more than a physiological process precipitating out a group of symptoms. Psychological, familial, and sociological factors enter into the matter. The physician must encase the illness with a comprehensive understanding. This the family physician is in the best possible position to do. He is oriented to the patient's family, the home life; interpersonal relationships; traditions and value system; historical or time-wise knowledge of the family as a social organism; and lastly, the tendencies, weaknesses and susceptibilities of individual members, and the psychologic repercussions in the group when one or another falls ill.

Moreover, through early recognition of emotional besetments, he can ameliorate and refer them if necessary while they are yet reversible. In many cases where it is best for him to keep the patient, he can do so through the supervision of a psychiatrist in the background, if his community makes possible this arrangement. A patient may take referral as a rejection and will respond and work better for his own doctor if the latter can obtain counsel and guidance from a psychiatric colleague. The patient particularly fears deception and dreads betrayal, but especially at the hands of one who is as close as his own physician.

From the physician's standpoint, if he wishes to be forthright in dealing with emotional problems in his practice, he can join a study group of physicians with similar aims. Under the supervision of a psychiatrist who is personally, professionally, and pedagogically mature, he will have experience and training in the bilateral therapeutic process. This learning

experience carried out as an extension of or under the auspices of a medical school has stood the test of time, and has general sanction. Psychiatric skills are not to be learned quickly by becoming a member of some minor pressure group, or through gypsy courses that offer psychiatric magic. The individual doctor who elects the prudent course of study under the best conditions can gain more facility in handling his patients in a working relationship. He will reach a higher degree of self-awareness in his role of physician, and will likely receive some help in modifying his functioning personality. It will be a unique learning experience—sometimes painful, but in a group more tolerable. He will learn to focus in treatment—to know just what he is doing for his patient and why, and what is going on in the working relationship between them. He will acquire more ability to tip the scales toward therapeutic success by an informed use of tested psychiatric principles. By the use of case presentations from his own practice and discussions in the group, each physician benefits, while at the same time the whole group shares a profitable learning experience through participation.

The whole area of psychiatry becomes ever more subtle in response to the times we live in. The universe is expanding into frightening dimensions and new and dangerous possibilities as the Space Age dawns. Man's stresses and anxieties grow in proportion, and we must expect ever more diverse symptoms. So it is inevitable that the family doctor will be more and more called upon to help his patients deal with these stresses of sociologic, political, and economic origin, themselves leading to more and more fickle syndromes, as well.

If he measures up to his responsibilities and does not allow the wine of new popularity and admiration to go to his head, he may reclaim some ground lost when many patients deserted him for other prophets in medicine.

As matters stand, the family doctor may well be the Ace card against socialized medicine. Never have his opportunities to be helpful been greater, and never has his responsibility to patients and medicine been graver than in the new age opening up to mankind.

The Eleventh Hour*

CHESTER LAUCK**

At the Second World Medical Association meeting in Switzerland in 1948, an Irishman said in substance, "When an individual is indoctrinated with the philosophy that he no longer has a responsibility to himself or his family, you are striking at the very roots of democracy. When you turn to Government for everything, free enterprise is lost. If you accept this philosophy, then you must change your religious concepts. You can no longer believe in a God-made heaven in the hereafter; you must believe in a man-made heaven here on earth and let me admonish you to be very, very sure that the guardian angels in the man-made heaven don't turn out to be the secret police." We must learn that there is no such thing as something for nothing. There seems to be a widespread delusion existing today that money coming from Washington, for some strange reason, doesn't cost anybody anything.

America is riding the crest of a wave of prosperity never before dreamed of on this earth. Although we represent about six per cent of the world's population and seven per cent of the world's land area, we produce and consume over one-third of the world's goods and services. We manufacture nearly one-half of the world's products.

Yet, in spite of this prosperity, we suddenly find ourselves 295 billion dollars in debt. We owe more money in this country than all the other nations on earth put together. WHY? Simply because we have been spending more than our income. We have become involved in a deficit spending program for a number of years because people will not realize that the government does not have a stockpile of funds back in Washington which they can disburse or distribute at will.

Thomas Jefferson, in 1816, said "I place economy among the first and most important of Republican virtues and public debt as the greatest of the dangers to be feared.

Andrew Jackson said in 1824, "... If a national debt is considered a national

blessing, then we can get on by borrowing, but, as I believe, it is a national curse, my vow would be to pay the national debt."

In 1932, Franklin Delano Roosevelt said "Let us have the courage to stop borrowing to meet continuing deficits. Stop the deficit."

Mr. Khrushchev has declared that the Soviet Union no longer expects to defeat the United States on the battlefield of the military but rather as elected to destroy us on the battlefield of economy. They are aiming directly at the strength and stability of our American dollar. It is their hope that we will spend ourselves into bankruptcy and if we continue our deficit spending program, we are aiding and abetting their cause.

Washington is not entirely at fault. Let's put the blame where it belongs—on ourselves. We have not assumed our responsibility of citizenship. WE ASKED FOR IT. Every project we undertake—whether it is for a rural community, a village, city, county, or state, or whether the project be an overpass, underpass, bridge, airport, or even urban renewal—the first question usually asked is, "How much government aid can we get?" It is generally asked without any regard or consideration as to where the funds might be coming from.

We have forgotten how to do things for ourselves. We forgot that with grants-in-aid come government controls, and with government controls we cannot embrace the free and competitive enterprise system—the system that brought about this prosperity and made America so outstandingly great. William Graham Sumner said it; "He who depends upon the state for protection, must pay for it by limitations on liberty. By every new demand which he makes upon his government, he increases its function and the burden of it on himself."

Last year we spent 83 billion dollars, including 43 billion dollars on national defense. We want national defense at any cost—even with the waste. But let's talk about the other 40 billion dollars. Ten years ago, in 1948, it cost 23 billion dollars to administer our government. That is

*Presented at Arkansas Medical Society Breakfast for American Medical Association House of Delegates, Board of Trustees and Guests, June 13, 1960.

**Executive Assistant, Continental Oil Company, Houston, Texas.

an increase of 17 billion dollars, nearly double the cost in ten years.

Early in the present administration, Herbert Hoover was called out of retirement and asked to head a committee to make a thorough study of the administration of our government and determine whether some savings could be effected. This committee was known as the Hoover Commission. The group made an exhaustive study at a cost of several million dollars to the taxpayers. The result of its findings, as made in its report and recommendations, showed that by eliminating unnecessary bureaus and agencies, a colossal 7½ billion dollars could be saved annually.

This Hoover Commission report was made nearly seven years ago. If the recommendations had been adopted, we could have reduced our national debt by some 50 billion dollars. Instead, we have increased our debt over 30 billion dollars during that same period of time. Last year more than 30 million people received checks from our government. One dollar out of every five dollars spent in the United States for both services and goods was spent by either federal, state, or local government agencies.

Someone recently said, "We have been living mighty high on the hog, but it 'ain't' our hog—it belongs to our children." Are we just going to drop this \$295,000,000,000 debt in their laps and ask them to scramble out of it the best way they can? Our children and future generations are entitled to inherit this republic as we found it—with freedom and opportunity, intact and unmortgaged.

Down through the annals of history, for 7,000 years, nations have risen to great heights of prosperity and then crumbled and fell—not from marching legions but from internal decay, complacency and too much government. Because of their prosperity, the people grew a little fat. And when they got fat, they got lazy. When they got lazy, they said "Let the government do it." And their government got bigger and bigger and the people got smaller and smaller and finally the people were barely nothing at all. Read the history of China, the great Roman Empire, Greece or France. Remember what happened in Germany only a few years ago.

That country was a highly industrialized and prosperous nation operating under a constitutional government. And recall how suddenly she collapsed. Is there any reason to believe that it cannot happen to us? Let's not wait and try to read the handwriting on the wall after we have our backs to it.

Some economists say we are beyond the point of no return. This is hard to believe. We must realize, however, that this is **THE ELEVENTH HOUR**. We must realize the direction toward which we are drifting and do something about it **NOW**. We have got to concern ourselves with government matters—to get into politics. Too many for too long have been saying, "I don't know anything about politics; I leave that up to the politicians." The result is that a handful of people have been running this country. And our \$295,000,000,000 debt, socialistic welfare programs, and the present threat against our free and competitive enterprise system indicates quite clearly **HOW** they have been running it.

We must begin at the grass roots. Attend our local precinct meetings. Find out what candidates for office stand for—not whether they are Democrats or Republicans, but what kind of Democrats, what kind of Republicans. We have too many Democratic Congressmen and too many Republican Congressmen in Washington and not enough United States Congressmen.

It is not too late to put the love of our country above partisanship interests by selecting conservative candidates for office and then supporting them with all our strength and influence. In this way, and only in this way, can we hope to preserve our Constitution and the American way of life. There are enough conservative members in both parties if they would but assert themselves and assume leadership.

We can and must select men for office who will think of the next generation rather than the next election. Men who will dedicate themselves to the preservation of our Constitution and our individual freedom—freedom of every man to stand on his own feet and be himself and become, God willing, whatever thing his vision, his manhood, and his faith can combine to make him.

When considering the problem of founding a new government, the American Pa-

triot who had been in the forefront of the Revolutionary War to separate the colonies from Great Britain, warned against creating a central government which, under the pretense of helping the people, might use the substance of the people to enslave them. It would be interesting to know what our forefathers must think of us and the way we have dissipated our inheritance—those pioneers who came to these shores only a few generations ago and carved this civilization out of a wilderness. They came here seeking freedom and opportunity. They did not ask for old-age pension, workmen's compensation, social security, unemployment insurance, minimum hours, maximum wages. Come to think about it, they didn't ask for . . . ANYTHING.

They realized that their future and the future of their families was their own responsibility and not that of their government. And with nothing more than a crooked stick for a plow, they rolled up their sleeves and looking toward Heaven said "Thank you God; I'll take it from here."

These are our forefathers from whom we descended, the freedom-loving folks who founded this great nation of ours. Now we must prove that we are of that same sturdy stock by assuming the responsibil-

ity of preserving the heritage they willed us. **THIS IS THE ELEVENTH HOUR!**

The doctors who go to make up the American Medical Association are dedicated men, highly regarded in their respective communities. Their counsel and advice is quite often sought. This affords a great opportunity for the doctors of America to persuade its citizens to think and realize the direction toward which we are drifting and stop this trend which can only lead to our destruction. We are facing a crisis. It is the only real threat to our economic security we have ever experienced. The members of the American Medical Association as individuals must stand up and be counted and exercise the influence which their position in their community places them and the American Medical Association must stand as a body to defend our free enterprise system and to ward off the threat of socialized medicine.

There are two things with which we need to be concerned. We need roots to hold us firm and we need sky to hold us up, and in between, a living process. Because, out of our beliefs we perform deeds, and out of our deeds we form habits, and from our habits grow our character, and **ON OUR CHARACTER WE BUILD OUR DESTINATION.**

The Diagnosis Of Strabismus*

JAMES E. MILLER, M.D.**

The most frequent cause of loss of vision in children is strabismus. It has been estimated that one out of fifty children has an ocular deviation, and in this group 12 percent develop poor vision (amblyopia). For this reason it is necessary that all physicians who treat children be aware of the methods used to diagnose strabismus. Even in the group who maintain good vision in both eyes, the ocular deviation is usually noticeable and is both a cosmetic and psychological handicap to the child.

the age of one and one-half to two and one-half years. At first the deviation is intermittent, but with the passage of time it becomes constant.

Two courses are possible. If the patient alternately fixates with either eye and deviates the opposite member, an alternating strabismus is produced and equal vision is maintained. On the other hand, if one eye deviates constantly, then the possibility of amblyopia is markedly increased. At the onset of the process the child is usually aware of diplopia which

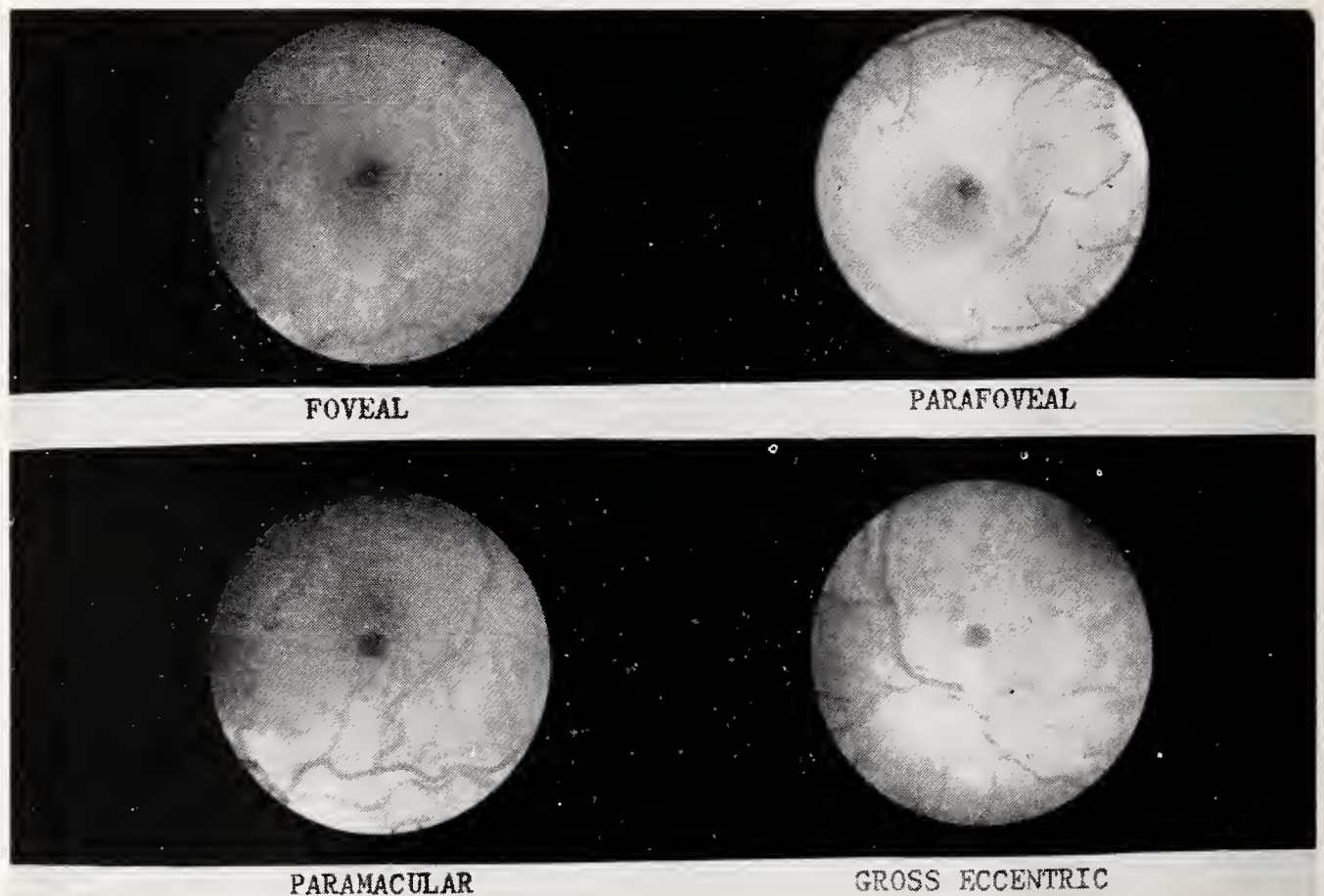


Figure I. Fundus photograph showing various forms of fixation in amblyopic patients. The patient was asked to fixate the black spot which was focused on the retina. The visual acuity in the example of foveal fixation was 20/40; parafoveal 20/50; paramacular 20/100; and gross eccentric 20/600.

The development of strabismus is often a progressive phenomena in which the child will maintain straight eyes up until

may be manifested by head shaking, blinking, or closing of one eye. Suppression of one visual image quickly develops which relieves the patient of his diplopia, but now he is no longer aware of the deviation. As suppression becomes more fixed, visual acuity decreases, so that ultimately only count fingers vision may be present

*Presented at Annual meeting of Ark. Med. Soc., Little Rock, Ark., April 17-19, 1961.

**From the Department of Ophthalmology and the Oscar Johnson Institute, Washington University School of Medicine. This investigation was supported in part by a research grant, B-1349, from the National Institute of Neurological Diseases and Blindness of the National Institutes of Health, Public Health Service.

in the deviating eye. The longer the persistence of amblyopia, the more profound it becomes, and the most resistant to therapy.

In addition to the subjective loss of visual acuity, there are objective changes in the patient's fixation. Under a normal situation all individuals fixate with the fovea of the eye. When an amblyopic patient is forced to look with the affected eye, fixation is usually not on the most sensitive area of the retina (fovea) but to one side. The further the distance from the fovea, the greater is the decrease in visual acuity. Actual fundus photographs of amblyopic patients are illustrated in Figure I in which the fixation varies from the edge of the fovea to the optic disc. The acuity varies from 20/40 for parafoveal to less than 20/200 for gross eccentric fixation.

The therapy of amblyopia in children under the age of four years usually consists of patching the fixating eye. This forces the child to use the poorer eye, and over a period of time his acuity and fixation will improve. In children under the age of two this may often be accomplished in less than a month.

In older children therapy is more difficult and requires a greater length of time. If fixation is near the macular or foveal

area, then prolonged patching may be used. However, if eccentric fixation exists, then most children will refuse to accept patching because of the poor visual acuity present. In the small number who will accept occlusion, patching must be carried out from four months to a year.

Recent techniques, one of which is illustrated in Figure II, have become available for training older patients. This is a modification of an ophthalmoscope so that a ring of light is projected rather than a spot. The instrument is used by surrounding the macular area with a ring of light and holding it steady for thirty seconds. The patient then sees an after-image that surrounds the area where fixation is desired and gives the child a clue for maintaining central fixation. With daily training it is often possible to re-educate fixation in two to six weeks. Once central



Figure II. Euthyscope used for training amblyopic subjects.

This is a modified ophthalmoscope in which the light beam is in the shape of a circle. The center of the circle is directed onto the macular area. This produces an after-image which surrounds the normal point of fixation and aids the patient in obtaining central fixation.

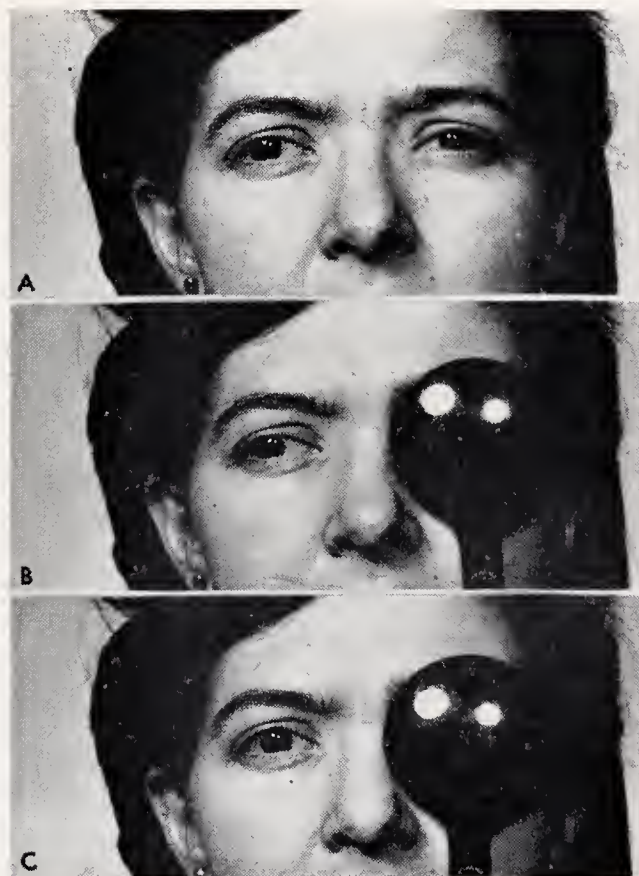


Figure III. Method of cover test.

A. Normal position of the patient with a right exotropia. Note that the corneal light reflexes are not equally centered in both eyes.

B. A cover is placed over the fixating left eye.

C. Covering the left eye forces the patient to fixate with the right eye which is then shifted nasally. The movement from B to C will be noticeable. No movement will be seen in patients with straight eyes.

THE DIAGNOSIS OF STRABISMUS

fixation is obtained and the visual acuity has reached 20/70, then patching of the non-deviating eye is added to the training.

The results with this technique are much better than patching alone since an acceptable acuity is obtained before the occlusion is changed to the better eye. This type of visual education requires a technician trained in ophthalmoscopy. A great deal of effort on the patient's and technician's part could be spared if suitable therapy for strabismus was obtained at an early age when patching is effective. Not only are the visual results better, but the correction of the strabismus is simplified if begun at an early age.

The prescribing of glasses may be sufficient to maintain straight eyes, whereas if the deviation continues for a number of years, surgery then becomes necessary. The topical use of cholinesterase inhibitors as drops is also effective in certain cases. If the deviation is allowed to persist, adjustments occur in the extraocular muscles and ultimately the eyes will be held in their abnormal position by ana-

tomical alterations, requiring surgical correction. There is also the additional problem of psychological changes in the school age child since his compatriots are notorious in calling attention to his difficulty. In cases in which surgery is necessary, the best binocular results are also obtained at an early age.

From all standpoints the present results could be improved if children were seen under the age of two years or when the strabismus first occurs. The techniques of diagnosis are quite simple and do not require elaborate equipment. Superficial inspection of the patient will demonstrate an obvious strabismus. This inspection is enhanced by the use of a penlight, with the patient fixating the light. It will be noticed immediately that in normal subjects the light is imaged in the same area in both pupils; whereas with an ocular deviation one light image will be out of alignment (Figure III-A). The presence of a deviation may then be confirmed by covering the fixating eye, which will necessitate fixation by the deviating member.



Figure IV. Example of a partial left fourth nerve palsy. This child is able to maintain straight eyes with his head tilted toward the right shoulder. Upon straightening his head he develops a left hypertropia.

The eye movement to take up fixation will, of course, be noticeable. Therefore, one looks for the shift in fixation upon occlusion of the dominant eye (Figure III-B, C). In turn, the cover may be then shifted to the opposite eye and another change in fixation observed. Small deviations will be recognized by shifting the cover from one eye to the other and observing the eye movement. The presence of strabismus is easily demonstrated by the combination of observation, pupillary reflexes, and the cover test.

Sometimes patients are able to maintain straight eyes by changing their head position. This type usually is on the basis of a complete or partial paralysis of an extraocular muscle. An example of the head

tilt due to a superior oblique palsy is illustrated in Figure IV. This boy is able to maintain his eyes straight with his head tilted towards the right shoulder. Upon straightening his head upright, the left affected eye turns up. If a patient holds his head constantly in one position, it is well to turn the head or face towards the opposite direction and recheck him for strabismus.

In summary, it is urged that all physicians handling children adopt the simple cover test to diagnose strabismus. It is further recommended that once this diagnosis is made, these children be referred to an ophthalmologist for further handling of their strabismus and amblyopia. The best results from all standpoints are obtained in young children.

North By West*

The story of John A. Wyeth, M.D., and his three years on White River.

JOHN P. MORROW, JR.

Most of you have been wondering why I am here tonight. I have been wondering, too, since Mrs. Gray asked me to have a part on your program. In justification, let me tell you that I have had association with the Independence County Medical Society longer than most of its present members, dating from June 1, 1907, as my birth certificate will show.

Batesville is proud of the Doctors who have been elected President of Arkansas Medical Society, Dr. William Lawrence, Dave Ewing, Billie Lawrence, Rob Dorr, L. T. Evans, and the two with us tonight, Dr. Johnston and Dr. Monfort. It has been my privilege to benefit from the professional skill and to enjoy the friendship of five of the seven Presidents from our city.

This is another observance of Doctors Day, when tribute is paid to the fine work of Physicians and I know of few people who feel as grateful for the care, skill, patience and understanding which the Medical and Nursing professions have shown as I do. This may be a poor way to show gratitude, but, as a token of esteem to the Doctors of America, I want to share with you the story of a man whom I have come to admire greatly.

Most of you have probably never heard of him, but all of you are better Doctors because of him.

More than any other man, he exerted an influence on medical instruction in America that has given our nation first place in the education and training of our Physicians and Surgeons.

Our American language has two adjectives, originally opposite in meaning, that thru overwork and misuse have come close to being meaningless. Without too much stretching of grammatical limits, I want to apply both to the subject of our study tonight. Dr. John Allen Wyeth could be considered a typical candidate for the M.D. degree. He came from a family of moderate means, a comfortable home and enjoyed a good education. To secure his medical training, he worked, not only mentally but physically, and it was hard work. I know that most of you Doctors

here did the same thing, and none of you are ashamed of it. Also, typically, he was interested in other things than medicine. Most of you enjoy a hobby.

The other adjective is ideal. The high esteem in which any man elected to the office of national president of any organization is held is proof in itself of his ability, honor and fine reputation. I can think of no higher evidence of what medical men consider their ideal doctor than his election as President of the American Medical Association.

It was interesting to note the ratio of Doctors from the South elected to that office. In the 14 years preceding the War, that is, from 1847-1860, there were six from the South and eight from the North; 1866-1903, to include Dr. Wyeth's tenure, the percentage changed with 21 Northern and 14 Southern, with two from the Army. Indicative of the fast healing of any breach between Northern and Southern Medical men was the election of 1869 of Dr. Baldwin from Alabama. The next 57 years, 1903-1959, saw 39 from the North, 16 from the South and one each from the Army, Navy and Public Health.

The man about whom I want to tell you tonight is the only one with an Arkansas connection to reach that high office. We are concerned with the story of John Allen Wyeth and how he went West to go North and become the leader of American Medicine in the era embracing the last of the 19th and first of the 20th Centuries.

My acquaintance with the Wyeth story stems from my interest in Gen. Nathan Bedford Forrest. Dr. Wyeth's biography of the great cavalryman, written in 1899, is still the last word on the subject. When I found a copy of the long out of print volume and mentioned it at home, my Mother and Aunt remarked that Dr. Wyeth and my Grandfather had been friends at Grande Glaize about 1870. Letter files from 1908 to 1922 produced a number of letters from the Doctor. From them, from Wyeth's own biography, his articles in newspapers, magazines, and the Arkansas Medical Journal, and from fam-

*Presented before the Second District Medical Meeting March 30, 1961.

ily recollections come the study I give you tonight.

Dr. Wyeth had the legendary start toward a presidency since he was born in a log house, though not a cabin, near Gunter'sville, Alabama in 1845. His one year in college, spent at La Grange Military Institute, was interrupted by the War and in August, 1862, he joined Gen. John Hunt Morgan's Cavalry. He participated in Morgan's famous "Christmas Raid" into Kentucky which concluded with a 72-hour ride thru a blizzard from Bardstown, Ky., to the Cumberland River. When Morgan's command decided he was too young for a regular cavalryman, he became attached to the 4th Alabama Cavalry, led, coincidentally, by a Dr. Russell. Wyeth's company "I" was commanded by another Doctor, Will Fennell.

He fought with Wheeler's Cavalry in Middle Tennessee thru the summer of 1863, taking part in the great battle of Chickamauga and was captured in early October.

Without going into the gruesome details of Dr. Wyeth's life in the prison camp near Indianapolis, called Camp Morton, I will state that McKinley Kanter could have written as unpalatable a story of the cruelties in northern prison camps as he did about Andersonville, and it would have been the truth. Forced to sleep in the open without blankets, Wyeth suffered a severe attack of pneumonia and soon after being sent to the heatless barracks he contracted measles. He did not feel the heat of a stove thru the winter of 1863-1864, though the temperature fell to twenty below zero. Only the help from relatives living nearby saved this frail youth for his future usefulness to mankind.

Dr. Wyeth led a movement in 1912 to place a bust of a former commandant of Camp Morton in the capitol at Indianapolis. This man, Col. Richard Owen, had been a kind, courteous officer and over 400 Confederate soldiers, most of them former prisoners, contributed to the fund.

Wyeth was sent to Baltimore in February, 1865, for exchange, riding in an unheated box-car thru country covered with snow, but glad to be homeward bound. His journey across the South paralleled that of any veteran returning home after Appomattox.

His experience and acquaintance with Doctors in the Army and Prison Camp probably had a decided influence in his turning to medicine as a career, and in September, 1867, he entered the Medical Department of the University of Louisville. In his words: "The medical department of the university was in 1867 one of the oldest and deservedly best known of the medical colleges in the United States. The course of study and the standard of requirements then prevailing at this school may be taken as typical of medical education in the United States at that period. There was no preliminary or entrance examination. Any male white who could read and write and who had mastered the rudiments of English was eligible.

The requirement for graduation was a satisfactory examination at the end of two college terms of seven months each. The division of subjects was: anatomy, physiology, surgery, medicine, obstetrics, chemistry and materia medica. Anatomy was thoroughly taught and the didactic course was supplemented by dissecting room work of a high class. While material was not over-abundant, the activity of our janitor kept us in a sufficient quantity of cadavers. How he got them we did not know and it is probably just as well that no inquiry was instituted.

The teaching of surgery and medicine was wholly didactic. I was no closer to an operation or patient than I had been to a stove in Camp Morton.

There was no course in microscopy or analysis."

"I had been looking forward to the day when I should receive my diploma and begin my career as a practising physician, but I can never forget the sinking feeling that came over me when I realized how little I knew and how incompetent I was to undertake the care of those in the distress of sickness or accident."

For his first three cases, he received the promise of a barrel of apple brandy in the coming fall. When he lost his first patient, in his first two months of practice, he resolved to give up his practice until he had a clinical and laboratory training under teachers of experience which would qualify him to be the type physician he felt he should be.

Such training was to be had only in New

York and Europe and that required money. To earn the necessary funds he followed the trend and "came West." He signed up with a railroad contractor as surgeon for the salary of \$75 per month, on a three months trial basis. His destination was the head of navigation on Little Red River, not far from Searcy, where was located a quarry from which they were to secure stone for the railroad bridge being built at De Vall's Bluff for the nearly complete Memphis and Little Rock Railroad. (Bee Rock, mile above Hwy. No. 67 Bridge—operated 1890 by being used to supply stone on lower Mississippi River.)

He tells a story of the fierce competition among steamboat lines of that time: A poor Arkansan, his family and belongings were on the wharf at Augusta awaiting passage to Memphis. He asked the Captain of an Elliott Line steamboat how much the fare to Memphis was. The reply was \$6. The Davis Line captain said he would take the crowd for \$3; the Elliott countered with an offer of free transportation and the Davis captain said he would haul him free and give him \$3 besides.

Railroad stories, forerunner of the "Slow Train Thru Arkansas" were being told: The first link of the Memphis-Little Rock line ran from Hopefield, across from Memphis, to Madison, on the St. Francis. As the train pulled into Hopefield, the conductor asked an old man for his ticket and received the reply that he had already turned it in. Asked where he got on, he said "Madison." "The only passenger getting on there was a little boy," the conductor answered. "I was the little boy," he replied.

Wyeth took passage from Memphis on the "Legal Tender," a well-known boat on the White River, the trip requiring 2½ days to cover the 142 miles down the Mississippi from Memphis and 177 miles up the White to Mouth of Red and some 30 miles up to Searcy, making a total of about 350 miles. The new mouth of the White, five miles upstream from the old, gives a saving of ten miles from Memphis to White River points.

He states that the time in 1905 by Railroad from Memphis to Searcy was less than five hours. Time from Memphis to Kensett is now 2½ hours.

Attending the sick and injured con-

sumed little time and Wyeth became acquainted with all aspects of construction work and river transportation. Since his medical duties involved the crew at De Vall's Bluff, he rode the sternwheel steamboat "R. C. Converse" as it towed rock-laden barges down for the bridge work. On these trips he spent the time in the pilot house, learning the river, making sketches of its winding channels and became familiar enough with the handling of the boat to stand his watch as Pilot in the next two years, saving for himself and partner the salary of \$150.00 per month.

The stone was quarried by hand, a slow, laborious operation and there was only a slight margin of profit on the work. A few weeks after his arrival, an absence of his employer left Wyeth in charge of the quarry. A sudden flood in Little Red River gave him opportunity to take the boat and barges a mile above the head of navigation where an abundance of rock could be loaded directly into the barges from the bed of the stream. A week's work by all hands, loading stone, taking it down to the old landing and dumping into the edge of high water where it was later reloaded for shipment, made a saving in the cost of operations of some \$4,000.00.

As a token of gratitude his pay was raised to \$100.00 per month, retroactive to his coming to work, on condition he remain another nine months at \$200.00 a month.

Upon his arrival as Surgeon, Dr. Wyeth had instituted a dosage of five grains of quinine before breakfast for every man on the job, himself included. This last is, indeed, strange doing for a Doctor, but he says he was never ill during his three years in Arkansas.

The concern soon shifted their operations to a quarry on Upper White River, 30 miles upstream from Jacksonport, he relates. I feel rather hurt that Batesville is not mentioned in his accounts but all his business was downstream. The quarry is actually 26 miles above Jacksonport and 15 miles below Batesville. Many of you have probably seen it from the river and have caught a lot of fish there. It is the high bluff just below the mouth of Goodie Creek about three miles east of Rosie. It was granted by the State of Arkansas to the Cairo and Fulton Railroad in 1857,

under an 1853 Act of the Legislature.

It is shown on the Government Survey of 1854 and is the first rock formation directly on White River above its mouth. For that reason, it was of particular interest to the Railroad for use in bridge work. Dr. Wyeth said his party was the first to develop the quarry, and, as far as commercial use is concerned, he is probably the only one.

It was purchased by my Grandfather from the St. Louis, Iron Mountain and Southern Railroad Co. in 1888, as much for friendship and sentiment as for a source of building material.

Dr. Wyeth says that he often made the trip from the quarry to Jacksonport on foot to get the mail and news and that on the 15-mile route he passed only one cabin. By crossing the river at the quarry, he could take a straight path to Jacksonport, striking the Batesville Road at old Akron. He was impressed by the rank growth of cane which made an impenetrable wall thru which nothing but bears could move, and he didn't want to meet any bears.

Early in 1871 the company for whom Wyeth was working failed, soon after they had received a contract for erecting some buildings for Woodruff County at Augusta. The superintendent told Wyeth that he was welcome to the boat, tools and contract if he would take over. A trip to Augusta and conference with the citizens and county officials gave him the job, calling for completion within one year and a thousand dollar bonus if completed two months ahead of schedule.

By keeping a crew at the quarry and one at Augusta he made good progress, fitting his boating operations to the favorable stages of the river. He was fortunate, during a continued low water period, to locate a quarry on a hill some three miles from Grande Glaize, where he secured flagstone for his floors and partitions, hauling stone to the river where year-round water was available. Stone from this quarry later went for revetment work on the Mississippi River.

On one of his trips up the river that year, with him running as second to his licensed pilot, the pilot, George Lewis, struck for \$20 per day while above Jacksonport. Feeling qualified to run the boat himself, he put Lewis ashore at Jacksonport, called his engineer, Jim Barnett, and

asked if he would stay at the engines with Wyeth in the pilothouse. "Doctor, I'll go with you to hell, if you will let me," came thru the tube and with that vote of confidence, they finished the barging. Wyeth later paid a penalty of \$150 for operating without a licensed pilot.

Low water caught him in February, 1872, with all but one barge load at Augusta. The doctor hurried to Jacksonport when he had a report of a four-foot rise coming, and had the good fortune to catch Captain Montgomery and the New Orleans packet "Seminole", headed for Batesville to bring back a load of cotton on the high stage of water. After much argument, Captain Montgomery agreed to bring his barge down from the quarry if it were ready to move at noon the next day. The heavily loaded stone barges, tied alongside the packet boats, made for difficult steering thru the shoals above Jacksonport, and Captain Montgomery was justifiably reluctant to endanger the safe passage of the "Seminole" in his hurried trip to Batesville, which must be completed before the water fell.

Dr. Wyeth, with less than an even chance of success, secured a fast horse and set out for the quarry, thinking to save hours by the shorter and faster overland route. The ferryman at what we call Point Ferry, across Black River, lived on the west bank and either could not be aroused at ten o'clock on a cold, sleety February night or did not feel inclined to face the elements, and the Doctor was forced to ride some miles upstream to the next Ferry. (He says it was six miles. Elgin Ferry is more than that distance.)

With the delay, it was daylight when he reached the quarry and he relates that, with the exception of the Christmas night ride with Gen. John H. Morgan around Lebanon, Kentucky, it was the worst weather he ever faced. Fortunately, he rounded up enough help to load the barge and be ready when the "Seminole" came down, promptly at noon. From Jacksonport to Batesville, 35 miles on a stormy night, a cargo of cotton to be loaded and the 15 miles down to the quarry made a busy 15 hours for Capt. Montgomery and his crew.

The pilot, Billy Shipp, a veteran riverman, who married Miss Leone Crouch, aunt of Allie Crouch of Batesville, later

told Wyeth that when he told Captain Montgomery that the barge was ready and Wyeth was signalling for a pickup, the Captain, with an oath, replied, "If that young man has ridden up here and loaded that barge since we left him in Jacksonport, he will be president of the United States."

Dr. Wyeth says that he remembered the remark, when 29 years later, he was elected President of the American Medical Association, and would not have considered the Presidency of the United States a higher honor than the one he held.

With this extra effort and good fortune he was able to finish his work in time to qualify for the \$1,000 bonus, which he received and with funds in hand, set out for his delayed post graduate medical education.

Since he was no ordinary man, he did not go by rail directly home but rode a steamboat up the Arkansas River, a three-day trip from Little Rock to Ft. Smith, on the pretext of looking over a proposed courthouse job. After a short stay in Indian Territory he was ready for New York or Vienna.

He goes at length to tell about his stay in Jacksonport, then an important river town and the friendly spirit of the people he met there. The hotels were kept by the McDowells and the Bachs and were social centers of the community. He enjoyed the esteem and good-will of the whole population, of all classes and conditions, and it was with regret that he learned of the decline of the once growing little city.

While in Jacksonport Dr. Wyeth became friendly with the telegraph operator, Billie Abbott, and learned the Morse code. During his stay in Augusta this ability was put to good use when the agent there, Jimmie Warner, became suddenly ill. While Wyeth's medical skill couldn't restore the invalid quickly, he was able to take over the telegraph office until relief arrived.

His praise for the fine citizens of Jacksonport and Augusta speaks well for his own good qualities. He mentions at Augusta Judge Amos Blanchard, a Federal soldier who returned after 1865 because he liked Arkansas and who made a good county judge in a somewhat hostile atmosphere. There were Judge McCurdy, Mr. Erwin, Ed Hough and a classmate of La

Grange Academy, Thomas Edward Stanley.

He even ventured into real estate speculation, buying for taxes land owned by Jefferson Davis and his brother, Joseph, but it was redeemed before confirmation. (This I have been able to check.) It amounted to 3,300 acres.

At Jacksonport he gave a clue to another of his outlets for talent by contributing to the local paper. He was later to be a well-known author.

Between the two larger towns was the now all-but-forgotten Grande Glaize. It was an important port and merchants there supplied Oil Trough Bottoms and considerable goods came overland as far as Batesville in low water. Here he met a young man who was to be responsible in no small way for the writing of Wyeth's best known literary effort, "The Life of Nathan Bedford Forrest" and for my being here tonight. This man had first seen Forrest in December, 1862 and for nearly 60 years, until his death in 1922, he carried the image of the great cavalry leader first in his heart. That I well know. He was my grandfather.

Dr. Wyeth says that while he did not serve with or see Forrest, the tremendous impact made upon his men so impressed this great Doctor that he felt compelled to compile the most comprehensive biography yet written of the man who, tho quoted as "Gitting there fust with the most," usually had to make do with the least.

While in Grande Glaize one day a stone cutter ran amok, knife in hand, and threatened death to any he caught. Hearing the commotion, my grandfather rushed to his store door in time to see Dr. Wyeth administer a complete anesthesia with a five foot, one by four flooring. My grandfather's response, tho unneeded, was recalled by Dr. Wyeth through the years.

The river made a lasting impression on this interrupted Medical Man, for his letters always mentioned White River, the shoals and bends, and he used correct procedure in handling his boat and in reporting his activities.

One bend in particular, "Blue Wing," where, some years before a boat by that name had sunk and her hulk blocked much of the channel, gave him a lot of trouble. He had gone into the bend with two barges alongside, backing (flanking they would

call it now) and intending to cut loose the barges and let them thru the chute while he followed with the boat. (I have seen this done on small rivers even today.)

A line fouled, the boat wouldn't answer her rudders and she sheered off, struck the wreck and went hard aground on a bar, where she stayed for two weeks. "Blue Wing" is three miles below Oil Trough, in the upper part of what we call "Hulsey Bend."

The shoal famous in his time for fast water was "Music," just above Jacksonport. Whether the name comes, as he asserts, from the tuneful sound of rushing water or from the wreck of a boat by that name is not certain. Just upstream from "Music" is "Mill Boy" Shoal, named from the Federal supply steamer which sank during a storm in 1864, nine miles above Jacksonport. The Official Records state that the cannon on board was saved and the Master reprimanded.

WHO'S WHO IN AMERICA will tell you what Dr. Wyeth accomplished in New York. He was surprised, on his arrival, to find no facilities for Post Graduate Medical training. Selecting Bellevue as the best, he matriculated in November, 1872 and graduated with the AD EUNDEM Degree in March, 1873, attending lectures in surgery, medicine and obstetrics.

His chief interest was surgery and he devoted most of his time to anatomy. His ability soon gained for him the post of unofficial assistant to Dr. Janeway and a private pupil of extraordinary background. This man, Dr. Samuel S. Laws, a Presbyterian minister, had been President of Westminster College in Fulton, Mo. until his Southern sympathies brought his forced exile to New York City for the duration of the War.

Laws added the M.D. to his M.A. LL.D. and D.D. and before returning to Missouri to head the State University, he invented and patented the "Ticker Tape" machine so long used to report stock market quotations.

After four years practice in New York Wyeth made his European tour to study the methods of teaching in the great medical centers there. While in Paris he outlined to Dr. J. Marion Sims, the great surgeon from Alabama, Past President of A.M.A., and his future father-in-law, his

plans for a new type of Medical School, using three years pregraduate and two years postgraduate work. It met with Sims' full approval and four years later The New York Policlinic Medical School and Hospital, the first postgraduate facility in America, became a reality.

The Medical School was amalgamated with Columbia University in 1918 and about the same time Dr. Wyeth temporarily turned the hospital over to the Government to take care of wounded from World War I. It was much harder to get it returned. I do not think Dr. Wyeth would favor Socialized Medicine.

Many stories are told about the hero marrying the boss's daughter, and using that union as a stepping stone to success. Dr. Wyeth did almost the parallel of marrying the daughter, for Dr. Sims was probably the then No. 1 Surgeon of America but Wyeth waited until he had achieved a degree of success himself before he proposed matrimony.

In the late 1890's he wrote two ambitious but widely different books, one his second edition of "Surgery" and the other "The Life of Forrest." It is remarkable that, two years after the appearance of the "Forrest," Dr. Wyeth was elected President of the American Medical Association.

His agreeable personality and professional skill brought financial aid and encouragement to his Medical School and Hospital. In its first 33 years, 1881-1914, over 25,000 graduates of medicine and surgery attended the clinics and courses of study in the Policlinic. He had the first auto ambulance in New York, three vehicles, serving some 368,000 potential patients. His flair for making friends and a tactful disposition were largely responsible for the reunion, during his Presidency of AMA, between two medical groups in New York State.

I was somewhat surprised to find that Dr. Wyeth was not unknown in this area. Dr. Johnston told me that while he had not met Wyeth, he had had his "Surgery" for years. Dr. L. T. Evans said, "Why, I know who he was. He used to be at Augusta."

The late Dr. Owen Walker, of Newport, would wax enthusiastic at talk of Dr. Wyeth and his School. He had attended several sessions of clinics there and said that Dr. Wyeth was always eager to see

someone from White River.

Dr. McGuire, the elder, of Augusta, came from Dr. Wyeth's home county in Alabama and attended Policlinic.

In searching the old records in the Woodruff County Courthouse, I ran into hostile incredulity as to Wyeth's work there. My only answer was that the county paid him nearly \$10,000 for something. Ted Worley, the able historian from the History Commission, finally straightened them out, to his and my satisfaction, if not theirs.

Wyeth mentions the man who kept the wood-yard (for boats) at Grande Glaize and the fact that he became a prominent physician at Pine Bluff. Some of you may recognize the man as Dr. Zaphney Orto, relative of the Coffin family here. He was Surgeon of the 2nd Ark. Inf. War with Spain and President Arkansas Medical Society 1889.

I have checked every statement possible in Dr. Wyeth's story. With the exception of slight variance in river mileage, and there was no accurate river survey made until ten years after his experience, there is nothing that will not stand up. His articles are in the "Century" and "Harper's" magazines, as he states, and WHO'S WHO gives his story year by year.

On one phase only can I question him, and that is in light of the peculiar financial management of Arkansas counties, now and then. How he was able to collect from Woodruff County, in carpetbagger days, cash money and take it with him, \$4,300 cash, he says, in the clear, is a miracle. But he was a remarkable man.

While payment for work was usually paid for in county script, its conversion to money was unusual but the last entry shows that he was actually given the balance in currency.

I do not think it an unwarranted assumption to name Dr. Wyeth as a representative from Arkansas in connection with his presidency of American Medical Association. His experiences on White River were vital forces in the development of the personality which made him a popular man among his colleagues and the funds earned here enabled him to continue and complete his medical education.

He was proud of his Arkansas days and friends and often spoke of the state of his "second home."

I can think of no Doctor who would better exemplify the profession as The Typical Doctor, The Ideal Doctor and The Doctor for Whom the Best Was Never Good Enough.

Realizing that a layman might be deemed incapable of giving proper evaluation of a Physician's worth, I can tell you that Dr. Harvey Stone, of Baltimore, wrote me a letter, praising Dr. Wyeth as a true leader in American Medicine. I was telling Dr. Carr of Memphis about Dr. Wyeth and of Dr. Stone's praise and Dr. Carr said "If Harvey Stone said he was tops, he was tops."

For Doctor's Day Doctor, I give you an All-time All American Medical Man, John Allen Wyeth, M.D., Alabama, Arkansas and New York.

The location of the quarry on Little Red River was given by Hon. Oran J. Vaughan, Searcy, who wrote that in 1890, under legislation by Steve Brundridge, member of Congress, the U. S. Engineer Department operated this quarry, barging stone down river for use by the Vicksburg District. Capt. Charles H. Warner, Batesville, tells me that his uncle, Capt. Ed Warner, had told him of stone operations on the Red in the 1890's and 1900's.

The "flag-stone" quarry, near Grande Glaize, was another operation by the Railroad builders, this time for the bridge below Newport on the White River. According to Franklin Morrow, City Engineer, Newport, Ark., Capt. Parkin, long with the U. S. Engineers, told him that all the flag-stone was picked up and used by the Vicksburg District on Mississippi River work. The quarry now has the appearance of work stopped suddenly, all stages of quarrying being visible, with huge blocks of sandstone ready to move. To move them now two miles to a railroad would be a formidable task. In 1870, with oxen, sleds and manpower it seems impossible.

The story of "Mill Boy" Steamer and shoal comes from Official Records War of the Rebellion, Series One, Vol. XXXIV, Part 2, page 241.

Just what the "Blue Wing" was, I am unable to ascertain. There was a Federal supply steamer by that name mentioned in OR as a Red River (Louisiana) boat during the War.

A local legend has a Federal boat car-

rying a paymaster load of gold sinking near the White River quarry Wyeth worked but no name is known. It may have been the "Blue Wing" but the wreck and quarry are 10-15 miles apart.

WHO'S WHO IN AMERICA 1912-13:

Wyeth, John Allan, surgeon; b, Marshall Co., Ala., May 26, 1845; s, Judge Louis and Euphemia (Allan) Wyeth; La Grange Mil. Academy; pvt. CSA; 15 months prisoner Camp Morton, Ind.; began study of medicine 1867; M.D. U. of Louisville, 1869, also A.D. EUDEM Belvue Med. Col. 1873; LL.D. U. of Ala. 1902, U. of Md. 1909; m, Florence N, d. of Dr. J. Marion

Sims, 1886; Asst. Demonstrator anatomy 1873-74; prosector to chair anatomy and surgery 1880-97, Mt. Sinai Hosp. N.Y.; organized and founded, 1882, first post graduate Med. School in U.S.—the New York Policlinic Med. School and Hosp.; and is prof. surgery and pres. faculty. Pres. N.Y. Pathol. Soc. 1885-6; N.Y. State Med. Assn. 1901; Amer. Med. Assn. 1902; N.Y. Acad. Med. 1907-08; South Soc. 1907. Author: Essays on Surgical Anatomy and Surgery; Textbook on Surgery; Life of Gen. N. B. Forrest; also many med. hist. and biog. sketches. Address: 244 Lexington, New York, N.Y.

♦ *What's* NEW ♦

Spinal Cord Injuries and Paraplegia

WILLIAM L. STEELE, M.D.*

The initial care of a fracture of the spinal column and first aid measures are well known. The primary treatment of a spinal cord injury essentially avoids rotation or flexion of the spine in order to protect the spinal cord from additional injury. The secondary phase of treatment involves reduction of the deformity of the spine as promptly as possible by traction and/or hyperextension. The tertiary phase involves total care of the patient, and this will be reviewed.

Transportation of patients with injury to the spinal cord, particularly those with quadriplegia, should have the patient in either a face-up or face-down position. The face-up position is more favorable for it produces less strain on the embarrassed respiration and distress of the patient can be lessened considerably by the use of traction in this position. Informed personnel, in attendance, will take all precautions to prevent flexion and rotation of the head, and also to insure a proper airway. The head may be stabilized by sandbags or a sectional neck brace may be used for this purpose. Steady traction to the head can be done by stockinette traction, or with a head halter device. Hyperextension of the thoracic and lumbar spine is not necessarily a position of correction, and this position should not be achieved for the purpose of correcting the bony injury, as it may further injure the spinal cord.

Upon admission to the hospital, a minimum of movement is always observed. If a Stryker frame is available and examination on the ambulance cart reveals paralysis of the extremities, the patient should be moved from the ambulance cart to the Stryker frame and this piece of equipment will be the patient's litter, his operating carriage, his operating table, and his con-

valescent bed, if necessary. Spinal cord injuries alone, reduce the blood pressure, but do not always produce surgical or traumatic shock. The initial examination includes the careful neurological examination with a sharp object to determine the level of sensory loss. The skin should be marked at the upper limits of anesthesia. This is of extreme value, and these marks should not be erased by the ward personnel as they will be used as check points to make sure that there is not a progression of the level of the patient's anesthesia. The level of anesthesia may be used as the centering point for roentgenograms of the vertebral column. Palpation of the back may reveal a gibbus, which would also serve as the centering point. While awaiting the development of the films, a No. 16 French Foley or small catheter is inserted under aseptic conditions and the bladder volume determined. If the bladder is distended, the bladder's return to a state of activity will be tardy. A urine culture should be obtained at this time. Evidence of blood in the urine will require additional studies.

It is felt that a lumbar puncture is not definitely indicated at this time, since the observation of a complete block would mean little and the observation of no block would mean little more.

If the fracture is in the cervical area, Crutchfeld tongs inserted into the skull will be required for reduction of the fracture and/or dislocation. Occasionally, tremendous amounts of weight fail to bring about a reduction. With the presence of positive neurological findings, most would agree that exploration is indicated. However, in the face of a negative neurological, which can occur, surgical intervention at this time might be unwise. The question as to whether laminectomy should be done at this point in the patient's course is open to question. The benefits and det-

*5520 W. Markham, Little Rock, Arkansas.

riments of the trauma of surgery, superimposed upon the trauma already sustained, have to be weighed.

The patient can be handled with ease on the Stryker frame; however, if such is not available, an alternating pressure point pad, whose partitions are expanded and contracted alternately by a small electric pump, may be used. This will serve to eliminate the problem of decubiti which is a great factor in the convalescent management of paraplegics.

Within the secondary phase of treatment, points of emphasis will include proper care of the bladder in which distention or continuous contraction is avoided, avoidance of urinary sepsis and prevention of urinary calculi, care of the skin, care of the bowels, dietary regulation, and maintaining the patient's emotional health.

The patient initially should be kept on a fluid intake of more than 2,000 cc. daily. The diet should have a high protein, high vitamin, and high caloric content. The skin should be checked regularly for decubiti, and daily analysis of urine and blood should be done. In addition, a weekly serum protein level should be obtained. Monthly films of the abdomen should be taken as a check for urinary calculi.

Bladder care has advanced through observations made during World War I and II. The care of the bladder will vary. The most ideal is to achieve at least an automatic bladder within a six weeks period. The bladder, after injury, is atonic and is incapable of building pressure. However, the bladder can be stimulated to regain its tone if a calculated amount of back pressure is placed on it with either a siphon-tidal drainage system, or careful clamping of the catheter for gradually increasing periods. The presence of a catheter may induce infection, and a small catheter must be used to allow the escape of secretions, and this should be changed at weekly intervals. Epididymitis is a common complication at this stage, but second in frequency is temporary occlusion of the drainage system. With this occlusion, the uretero-vesicle orifices are opened and a ureteral reflux occurs. This dramatic picture produces extreme hypertension, with chilling, followed by a marked temperature elevation. Depending upon the paralytic level, it is accompanied by a marked resistance, palpable in the flanks, as a re-

sult of the irritative effects on the psoas muscle. Treatment consists of establishing immediate bladder drainage, administration of urinary antiseptics, forcing of fluids, and roentgenograms of the abdomen to rule out obstructive calculi, if possible. Once this occurs, the patient is prone to have recurrent episodes of chronic pyelitis.

Skin care will be complicated if a hypoproteinemia exists. Soiling with urine and feces must be avoided. The paraplegic skin will not tolerate long periods of pressure with concomitant ischemia. When on a Stryker frame, the patient is turned every two hours, day and night. With the patient supine, the knees may be flexed approximately ten degrees, and the feet should be kept at a right angle or in a functional position. The heels must be suspended clear of the sheet, and when in a lateral position, the pillow should be placed between the legs to keep the knees and ankles apart. Sheets and bed clothing should never be allowed to rest on the upright toes, and the toes should never support the weight of the foot in the prone position. An early pressure area may be treated with massage, however, if the tissues beneath the skin have been involved in ischemia, massage will not retrieve these areas. In the face of a gangrenous area of skin, debridement should be started promptly. The ulcer floor should be packed with sterile, fine mesh gauze and dry sponges applied to this area. Daily dressing changes, consisting of wound cleansing with surgical soap, irrigation with peroxide, followed by dry dressings, are indicated. Any lesion with a dimension greater than 3 cm. in depth or 5 cm. in diameter can be expected to require several months to heal. These large lesions are amenable to plastic surgery, in which the bony prominences deep to them are resected to insure skin mobility, or flaps may be placed over the area involved in the decubitus and split-thickness grafts applied to the donor site. Education of the patient during his daily skin care must be constant in order to prevent these from developing. The patient can be taught to visually check his body length each time his position is changed to make sure that no areas are subject to abnormal pressure. He must be taught routine inspection and when sitting in a wheel chair, must be

Lifts depression...



You see an improvement within a few days
Thanks to your prompt treatment and the smooth action of Deprol, her depression is relieved and her anxiety and tension calmed — *often in a few days*. She eats well, sleeps well and soon returns to her normal activities.

as it calms anxiety!

Smooth, balanced action lifts depression as it calms anxiety... rapidly and safely

Balances the mood—no “seesaw” effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient—they often aggravate anxiety and tension.

And although amphetamine-barbiturate combinations may counteract excessive stimulation—they often deepen depression.

In contrast to such “seesaw” effects, Deprol’s smooth, *balanced* action lifts depression as it calms anxiety—both at the same time.

Acts swiftly—the patient often feels better, sleeps better, within a few days. Unlike the delayed action of most other antidepressant drugs, which may take two to six weeks to bring results, Deprol relieves the patient quickly—often within a few days. Thus, the expense to the patient of long-term drug therapy can be avoided.

Acts safely—no danger of liver damage. Deprol does not produce liver damage, hypotension, psychotic reactions or changes in sexual function—frequently reported with other antidepressant drugs.

Bibliography (13 clinical studies, 858 patients): 1. Alexander, L. (35 patients): Chemotherapy of depression—Use of meprobamate combined with benactyzine (2-diethylaminoethyl benzilate) hydrochloride. J.A.M.A. 166:1019, March 1, 1958. 2. Bateman, J. C. and Carlton, H. N. (50 patients): Meprobamate and benactyzine hydrochloride (Deprol) as adjunctive therapy for patients with advanced cancer. Antibiotic Med. & Clin. Therapy 6:648, Nov. 1959. 3. Beerman, H. M. (44 patients): The treatment of depression with meprobamate and benactyzine hydrochloride. Western Med. 1:10, March 1960. 4. Bell, J. L., Tauber, H., Santy, A. and Pulito, F. (77 patients): Treatment of depressive states in office practice. Dis. Nerv. System 20:263, June 1959. 5. Breitner, C. (31 patients): On mental depressions. Dis. Nerv. System 20:142, (Section Two), May 1959. 6. Gardon, P. E. (50 patients): Deprol in the treatment of depression. Dis. Nerv. System 21:215, April 1960. 7. Landman, M. E. (50 patients): Clinical trial of a new antidepressive agent. J. M. Soc. New Jersey. In press, 1960. 8. McClure, C. W., Papas, P. N., Speare, G. S., Palmer, E., Slattery, J. J., Konefal, S. H., Henken, B. S., Wood, C. A. and Ceresia, G. B. (128 patients): Treatment of depression—New techniques and therapy. Am. Pract. & Digest Treat. 10:1525, Sept. 1959. 9. Pennington, V. M. (135 patients): Meprobamate-benactyzine (Deprol) in the treatment of chronic brain syndrome, schizophrenia and senility. J. Am. Geriatrics Soc. 7:656, Aug. 1959. 10. Rickels, K. and Ewing, J. H. (35 patients): Deprol in depressive conditions. Dis. Nerv. System 20:364, (Section One), Aug. 1959. 11. Ruchwarger, A. (87 patients): Use of Deprol (meprobamate combined with benactyzine hydrochloride) in the office treatment of depression. M. Ann. District of Columbia 28:438, Aug. 1959. 12. Settel, E. (52 patients): Treatment of depression in the elderly with a meprobamate-benactyzine hydrochloride combination. Antibiotic Med. & Clin. Therapy 7:28, Jan. 1960. 13. Splitter, S. R. (84 patients): Treatment of the anxious patient in general practice. J. Clin. & Exper. Psychopath. In press, April-June 1960.

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this dose may be gradually increased up to 3 tablets q.i.d.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate.
Supplied: Bottles of 50 light-pink, scored tablets. Write for literature and samples.

Deprol[▲]

 WALLACE LABORATORIES / Cranbury, N. J.

taught to elevate himself with his hands and arms, if at all possible, in order to relieve the pressure from a single point on his buttocks. In a well trained paraplegic, this will become an automatic habit.

The bowel will lose its reflex function and in the initial stages, actual ileus will exist. This is treated by the usual decompressive measures. In activity, the bowel is similar to that of the bladder. In the first few weeks, warm enemas are given each day with regularity. Digital examination is done at weekly intervals for impaction. Coincident with bladder training, a bowel control program is instituted. As soon as the patient can sit up, his enemas are given in that position at precisely the same time of day. Laxatives are given, using care to keep the consistency of the stools soft. The patient is taught the duty of administration of his own enema and own digital examinations. Eventually, the enema is substituted with a glycerin suppository, and the patient spends 30 minutes at a trial of evacuation. If no results occur, this trial is repeated the following day, an enema being given if there are no results. Foods are outlined to the patient in regard to their effect on stool consistency.

A secondary anemia, which may be due to decubiti or on a dietary basis, is corrected by blood transfusions and maintained by proper diet.

Pain in such patients must be evaluated carefully. Root pain, not relieved by traction, might be relieved by surgical decompression. If this pain does not radiate along the root distribution, it rarely requires potent medication. Morphine or its derivatives and substitutes should never be given. These depressant drugs are undesirable in paraplegia, and the extreme vulnerability of the paraplegic patient to addiction makes them doubly dangerous. Intramuscular or oral administration of Phenobarbital is tolerated well, and it serves the same end. Adequate support with occupational activities will obviate the need for narcotics. Occasionally, six weeks from the time of injury, root pain can appear after the pain of the early period has long subsided. Decompressive laminectomy is occasionally successful, but not always. Tractotomy can also be done. Occasionally the patient, preoccupied with disability, will complain of constant burn-

ing pain. Many tolerate this well enough if they are active. Some personalities require much support and this makes them overly sensitive to pain.

Muscular spasms appear in patients who have no destruction of the distal segments. The pathological reflexes begin to appear around the sixth week and are of the withdrawal type. Often these are mistaken for voluntary motion. Once these spasms appear, their course is determined by many factors. Spasms can often increase the presence of decubiti, and are often sufficiently strong enough to throw the patient from the Stryker frame. A mild amount of flexor spasm is healthy since it maintains tonus and prevents withdrawal of mineral content of the bone. Spasms may deform by forcing the hip into adduction and forcing its dislocation eventually. The patient can be drawn into extreme flexion at the knees and hips, making it impossible for him to be braced. Spasms may make the patient socially insecure because of the freakish starting and stopping of these uncontrolled motions. Early bracing and brace training, plus ordinary standing, seem to have a diminishing effect upon the intensity of these spasms, and will, at times, completely subdue them. For this reason, when possible, patients are placed on a simple standing board, and gradually, each day, brought into a more erect position. This, with the aid of abdominal binder, conditions them for brace walking.

The paraplegic patient requires strong shoulders and arms. During the first two weeks after injury, complete bed rest is usually followed. The physical rehabilitation course varies according to the lesion, but, if at all possible, he is encouraged by the therapist to participate in extension exercises, concentrating on building the strength of the arms with dumbbells. For thoracic and lumbar injuries which permit bracing and hyperextension, the patient is moved to an exercise mat as soon as possible and started on pullups and pushups in the prone position. If his lesion permits him to elevate his hips, light braces are made for the lower extremities, which lock the knees into complete extension and hold the foot at 90 degrees with a drop foot spring. Suction-tip crutches are used. Initially, he is walked in parallel bars and taught either a swing to gait, in which

the feet are dragged to a standing position, or a swing through gait, in which the feet are thrown ahead of the vertical line of the body by a pendulum motion. The patient observes the gait in mirrors and makes the necessary balance corrections. Lesions below the tenth dorsal segment permit obstacle course training, and many centers have a score card in which the patient is taught stair climbing, curb walking, and functions inside a mock-up home. By using a light weight folding chair, the patient is able to enter and exit his own car, and operate it by special hand devices. He is taught to fall under controlled situations and to bring himself erect with crutch recovery.

The rehabilitation of these patients depend upon many factors such as age, intelligence, and re-orientation to the disabled state. With acceptance of disability and determination to go through the necessary steps to return to society, the future course of these patients can be assured.

Vocational rehabilitation follows as a continuation of therapy, with the testing of aptitudes. Ultimate placement in a compatible vocation is an important part of this training. The vocation must always be fitted to the patient. Social rehabilitation encompasses all phases of activity. The major part of this will be automatic, once bowel and bladder control are assured.

**A TEACHING SEMINAR
FROM THE
UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE**

A Case of Pseudo-Pseudohypoparathyroidism

JAMES L. STECHER, M.D.*

Albright and co-workers (1) in 1942, described three cases characterized by short stature, round face, stubbing of the fingers and toes with short metacarpal and metatarsal bones, ectopic calcification and ossification, tetany, convulsive symptoms, lenticular opacities and calcification of the basal ganglia. These patients had hypocalcemia and hyperphosphatemia and little or no phosphorus diuresis was noted on intravenous injection of parathyroid hormone. Histological examination of the parathyroid glands in two of these cases revealed them to be hyperplastic. The syndrome was termed by Albright as pseudo-hypoparathyroidism, and it was suggested that the hypocalcemia and hyperphosphatemia were due to failure of the end organ to respond to endogenous parathyroid hormone with the remaining abnormalities being due to independent genetic defects.

Albright and associates (2) in 1952, described a case exhibiting clinical features suggestive of pseudo-hypoparathyroidism but in whom a normal serum calcium and phosphorus were recorded. The abnormality of body build, dyschondroplasia, ectopic ossification, and a normal serum calcium and phosphorus with inability to react to injected parathyroid hormone was termed by Albright as pseudo-pseudohypoparathyroidism. A number of cases (3,4,5,7,8,9,10) have now been reported showing certain variations but generally corresponding to Albright's original case. The response in these patients to injected parathormone has not been consistent and has ranged from no response to a normal response. The case reported by Wallach, Englert and Brown in 1956 (5), also had

gout; a finding which as yet is undefined in its relationship to pseudo-pseudohypoparathyroidism.

This is the report of another case corresponding to the cases previously reported, and in whom the presence of gout is also noted.

HISTORY: This 26-year-old unmarried white man was first seen at the Little Rock Veterans Administration Hospital in 1954, with a history of fever, swelling and pain in his ankles, feet, knees and back of three weeks duration. Examination revealed swollen and tender ankles, right knee, metatarsal and phalangeal joints. The diagnosis of early rheumatoid arthritis was made, and the patient improved after salicylates and physical therapy. He was seen on two other occasions in 1954, for similar complaints and improved on phenylbutazone therapy and physiotherapy.

The patient returned in 1955, with symptoms of pain and swelling in the elbows. Serum uric acid was 9 milligrams percent at this time, and a diagnosis of gout was made. He improved on salicylate therapy. The patient was evaluated at this time for a possible endocrine disorder because of the previously noted stubbing of the fingers and toes with bilateral shortening of the fourth metacarpal, rounding of the face, short stature and a tendency to tower skull. The work up included an evaluation for possible pseudo-hypoparathyroidism. The urine and serum calcium, phosphorus and alkaline phosphatase studies were normal, and the urine Sulkowitch was zero. The patient left the hospital before the work up could be completed. He was again seen in 1955, for joint symptoms and improved on probenecid therapy. Serum uric acid at this time was 9 milli-

*Department of Medicine, Veterans Administration Hospital, Little Rock, Arkansas.

grams percent. He was again admitted in 1956, for arthritic symptoms with marked relief gained by colchicine therapy. At this time the diagnosis of gout and gouty arthritis was made. His last hospitalization here was in March 1957, with similar complaints responding to colchicine therapy.

The patient's past history revealed a normal development except for enuresis until the age of fourteen. His mother, father, one brother and three sisters are all living and well, and no history of congenital abnormalities was obtained. Past history was otherwise noncontributory except for fracture of the third, fourth, and fifth fingers of the right hand in 1954. The system review was essentially negative.

was rounding of the face with a tendency toward "tower" skull. The extremities were shortened, and the fingers and toes stubbed with shortening of the fourth metacarpal bilaterally (Fig. 2). The sclerae were clear and the fundi revealed marked tortuosity of the vessels with blurring of the discs. These findings have been interpreted by the consulting ophthalmologist as congenital tortuosity of the vessels and pseudo-papilledema. The thyroid was not palpable. The heart, lungs, and abdomen were normal, as were the genitalia. Extremities revealed the presence of fluid in the knee and ankle joints with increased temperature. The right olecranon bursa was filled with fluid and measured 3 by 3 centimeters with the presence of small, scattered, hard nodules in the bursa walls. Several fixed, firm, one centimeter nodules were palpated over the left ulna below the elbow. The remaining physical examination was normal.



Figure I

Pseudo-Pseudohypoparathyroidism



Figure II

Pseudo-Pseudohypoparathyroidism

PHYSICAL EXAMINATION: The patient was of short stature with a height of 63 inches and weight of 155 pounds (Fig. 1). Hair distribution was normal. There

LABORATORY FINDINGS: On admission in August 1957, hemoglobin was 14.5 grams/100 millimeters; white blood count 8,950/cubic millimeter, neutrophils 57 percent, lymphocytes 27 percent, monocytes 2 percent, and eosinophils 6 percent. Erythrocyte sedimentation rate was 9 millimeters/hour Wintrobe. Serum uric acid was 4.2 milligrams percent. Blood urea nitrogen was 11 milligrams percent. Serum alkaline phosphatase was 3 King Armstrong Units per 100 millimeters. Serum proteins were normal. Serum calcium, 10

A CASE OF PSEUDOHYPOPARATHYROIDISM

milligrams percent. Serum inorganic phosphorus, 3.8 milligrams percent. All previous calcium and phosphorus studies had been normal. Serum sodium, 143 millequivalents/liter. Serum potassium, 4.1 millequivalents/liter. Urinalysis revealed a specific gravity of 1.012 with negative sugar and albumin and an acid reaction. Ellsworth Howard (6) test—The patient was fasted for sixteen hours receiving only water. Urine was collected hourly from 7:00 a.m. to 3:00 p.m. and Parathormone (Lilly), 200 units, was injected intravenously at 10:00 a.m. The results are represented in graphic form in Figure 6 including a control of patient's response. The patient had received 0.5 milligrams of colchicine at 9:00 a.m., but it is thought this did not affect the test.



Figure III

Pseudo-Pseudohypoparathyroidism

X-RAY STUDIES: X-ray of the skull revealed scaphocephaly and dolichocephaly with hyperostosis interna in the frontal and posterior parietal bones (Fig. 3). The sella turcica was normal. Studies of the spine and pelvis revealed a minimal osteoporosis with osteoarthritic changes present in the acetabulae of both hips and an anomalous secondary ossification center of the superior margin of the greater trochanter of the left femur. The right elbow revealed a five millimeter olecranon spur with enlargement of the olecranon bursa with miliary calcific densities present in the bursa wall. The left elbow had similar

changes but to a lesser degree. X-rays of the hands (Fig. 4) revealed shortened and



Figure IV

Pseudo-Pseudohypoparathyroidism

thickened first and fourth metacarpal bones and thickened proximal phalanges of the fourth and fifth fingers bilaterally. Films of the ankles (Fig. 5) revealed soft



Figure V

Pseudo-Pseudohypoparathyroidism

tissue calcification and swelling about the joints with accessory epiphyses present at the inferior tip of both lateral maleoli and cystic osteoarthritic changes present about the medial and adjacent tali. There was an ossified periostitis at the attachment of the muscles to the lower lateral

malleolus of the right fibula. Previous x-rays of the knees in March 1957, revealed a bilateral synovitis with minimal

Ellsworth Howard Phosphorus Diuresis Test

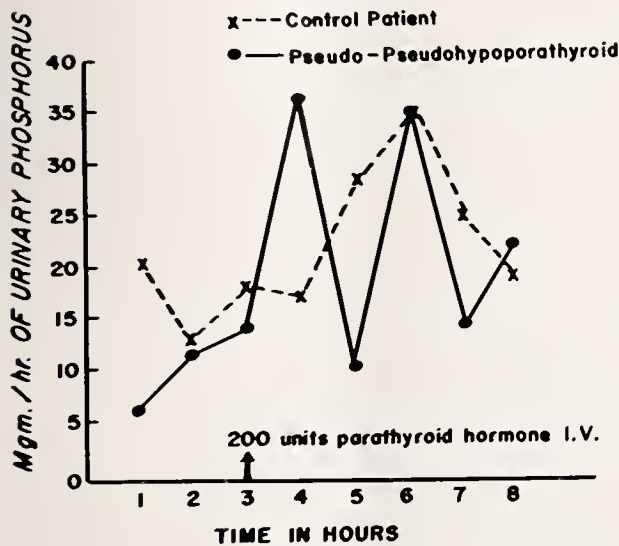


Figure VI

Pseudo-Pseudohypoparathyroidism

fluid in both knee joints and linear calcific plaques in the medial soft tissues between the condyles medial to the tibia and femur, most marked on the left.

DISCUSSION

Since the introduction of the syndrome of pseudo-pseudohypoparathyroidism by Albright in 1952 (2), it has now been fairly clearly defined and restricted to those cases exhibiting shortened stature, rounded faces, shortening of the metacarpals (most commonly the fourth and fifth) and metatarsals, ectopic ossification, normal serum calcium and phosphorus levels and a variable response to injected parathormone. The relationship of gout in this case and in the patient reported by Wallach, Englert and Brown (5) and of gonadal dysgenesis in the cases reported by Van Der Werf Ten Bosch (10) has not as yet been clearly defined.

The physical characteristics found in pseudo-pseudohypoparathyroidism may or may not be present in pseudo-hypoparathyroidism supporting Albright's original view that the chemical abnormalities are independent of the ectopic ossification and dyschondroplasia and that the syndromes are the result of unrelated genetic defects

which may vary to produce different syndromes. The term pseudo-pseudohypoparathyroidism is admittedly a poor one in that no disease of the parathyroid gland has been demonstrated in these cases; however, it would appear that usage has fixed the term.

In those cases in which the Ellsworth Howard parathormone test was performed, the responses have been variable. Of the six patients in whom the test was performed, no response was obtained in two due to impotent extract (2,7). A slight response was obtained in one (3) in which a normal response was obtained in the control patient. No response was obtained in the case reported by Smulyan and Raisz (9) using extract of known potency. In addition, an abnormal response was obtained in this patient on the calcium loading test suggesting a defect in the renal handling of phosphates. In the case reported by Ray and Gardner (8) the test was reported as negative but no control study was done, and the potency of the extract was in doubt.

The remaining cases, including the present case, were reported to have a normal response to parathormone injection.

SUMMARY

It would now appear that pseudo-pseudohypoparathyroidism has emerged as a definite clinical entity characterized by the findings of shortened stature, rounding of the face, dyschondroplasia of the metacarpals and metatarsals, ectopic ossification, normal serum calcium and phosphorus levels and a varying response to parathormone injection.

A case of pseudo-pseudohypoparathyroidism has been presented exhibiting the above findings and in whom a biphasic response to the Ellsworth Howard parathormone test was obtained which was interpreted as a normal response. This patient also had gout, a finding previously reported (5). Congenital tortuosity and pseudopapilledema were also found in this patient.

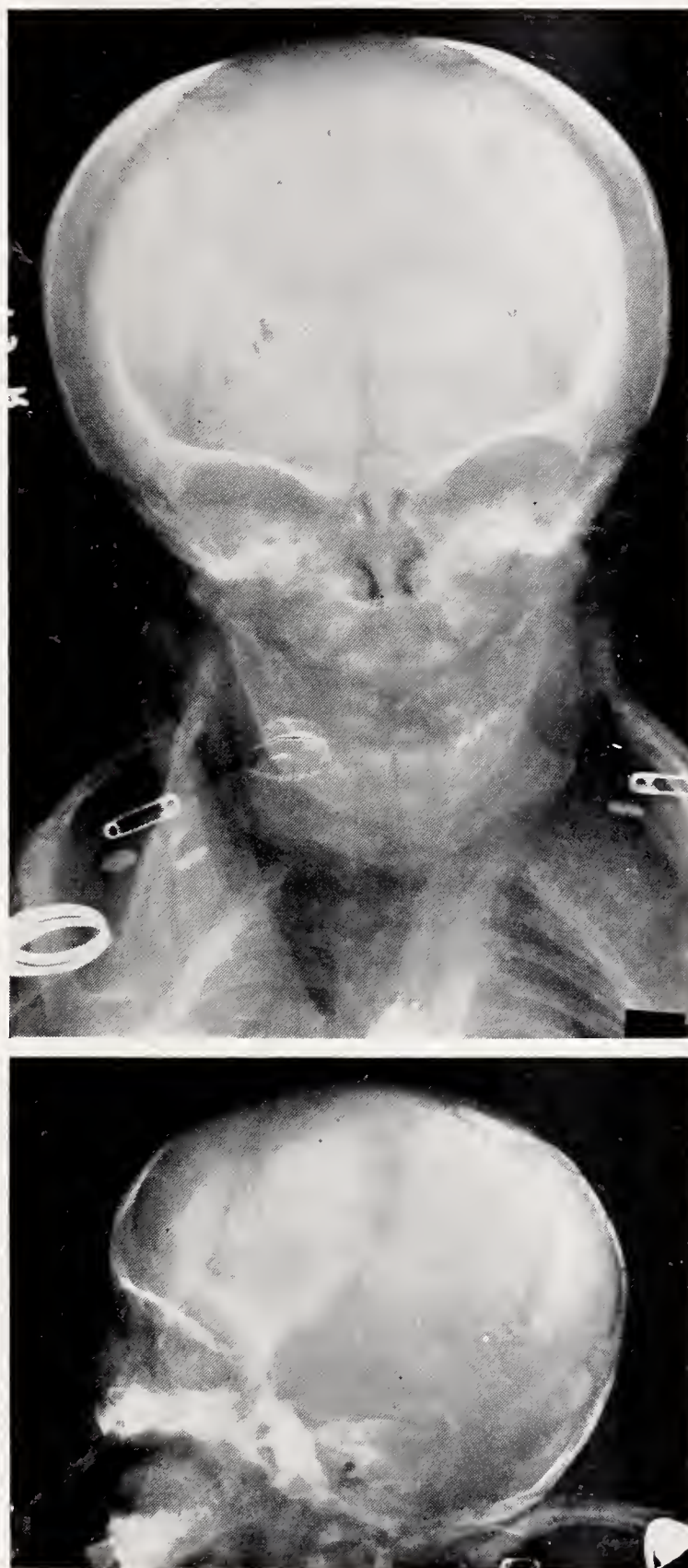
Bibliography

1. Albright, F., Burnett, C. H. Smith, P. H. and Parson, W. Pseudo-hypoparathyroidism—An Example of "Seabright-Bantam Syndrome": Report of Three Cases. *Endocrinology*, 30:922, 1942.

A CASE OF PSEUDOHYPOPARATHYROIDISM

2. Albright, F., Forbes, A. P., and Henneman, P. H. Pseudo-pseudohypoparathyroidism. *Tr. A. Am. Physicians.* 65:337, 1952.
3. Miles, J., and Elrick, H. Pseudo-pseudohypoparathyroidism: Report of a New Case. *J. Clin. Endocrinol.* 15:576, 1955.
4. Roche, M. A case of Pseudo-pseudohypoparathyroidism. *J. Clin. Endocrinol.* 15:964, 1955.
5. Wallach, S., Englert, E. Jr., and Brown, H. The Syndrome of Pseudo-pseudohypoparathyroidism. *Arch. Int. Med.* 98:517, 1956.
6. Ellsworth, R., and Howard, J. E. Studies on the Physiology of the Parathyroid Glands. VII. Some Responses of Normal Human Kidneys and Blood to the Intravenous Parathyroid Extract. *Bull. Johns Hopkins Hosp.* 55:296, 1934.
7. McNeely, W. F., Raisz, L. G., and LeMay, M. Dyschondroplasia with Soft Tissue Calcification and Ossification, and Normal Parathyroid Function ("Pseudo-pseudohypoparathyroidism"). *Am. J. Med.* 21:649, 1956.
8. Ray, E. W., and Gardner, L. I. Pseudo-pseudohypoparathyroidism in a Child: Report of the Youngest Case. *Pediatrics*, 23:520, 1959.
9. Smulyan, H., and Raisz, L. G. Pseudo-pseudohypoparathyroidism with Unusual Features. *J. Clin. Endocrinol.* 19:478, 1959.
10. Van Der Werff Ten Bosch, J. J. Brachymetacarpal Dwarfism ("pseudo-pseudohypoparathyroidism") With and Without Gonadal Dysgenesis. *Lancet.* 1:69, 1959.

What Is Your Diagnosis?



From Radiology Dept., University of Arkansas Medical Center.

FOR ANSWER SEE PAGE 126

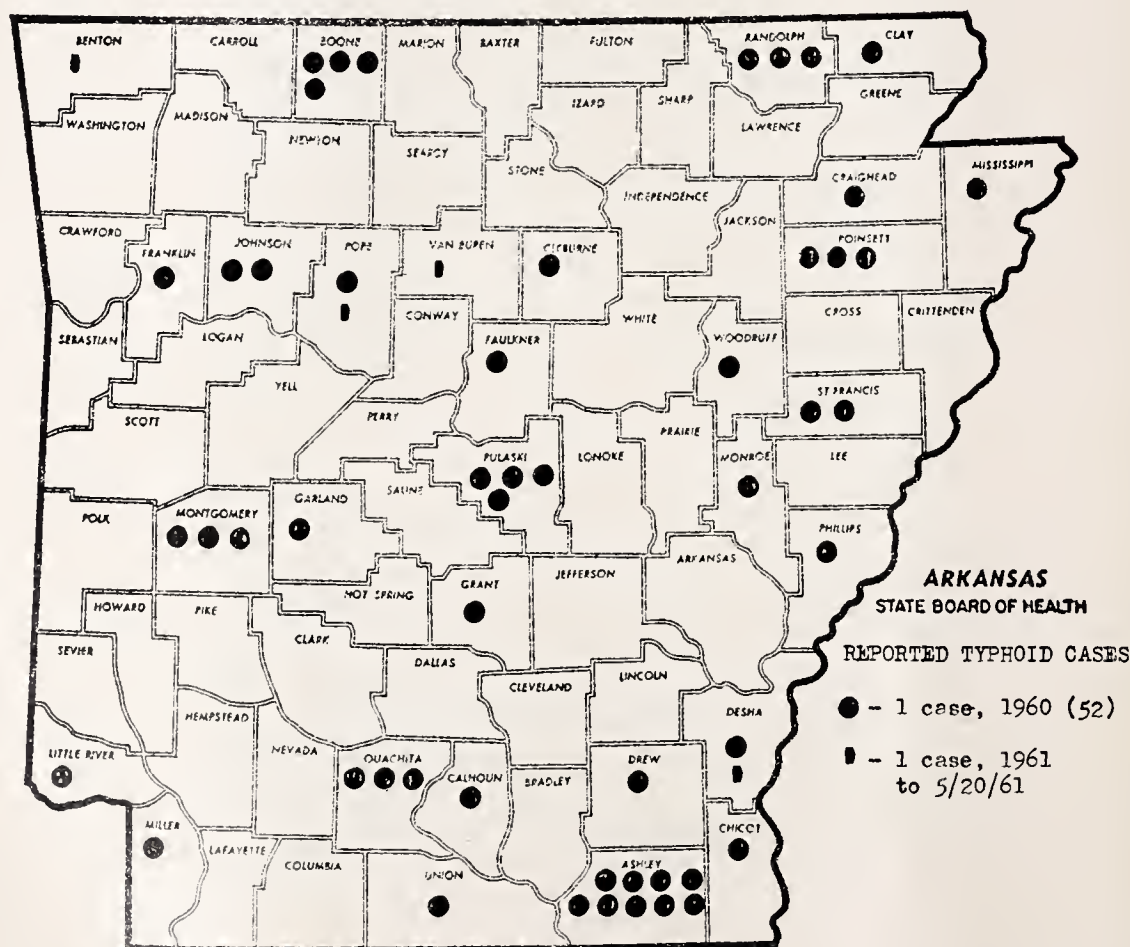
Arkansas Public Health at a Glance

Typhoid Fever

Typhoid fever is a very old disease and has caused as many deaths as swords and bullets in the past. This devastating disease still produces considerable human suffering throughout the world. Although much of its danger has been reduced by the use of chloromycetin, every effort to prevent it by improved sanitation and immunization should be encouraged. In addition to improving the sanitation and adequacy of water supplies and public eating places, every effort should be made to ferret out the occasional typhoid carrier to eliminate this constant threat of contamination for the food and drink of the respective communities. There are 112 known carriers in the State of Arkansas under surveillance; 28 former residents of

Arkansas are known typhoid carriers and may return at any time for a short visit or to reestablish residence. Although surveillance of known carriers reduces their hazardous potentials, the unknown carriers who are eluding identification still account for 67 percent of our typhoid cases which in turn may produce more typhoid carriers. Therefore, immunization against this malady is imperative so long as even one typhoid carrier exists. Every effort should be made to determine the etiologic agent in suspected cases and proven cases reported promptly.

Wm. L. Bunch, Jr., M.D., Director
Division of Communicable
Disease Control
Arkansas State Board of Health



RESOLUTIONS OF THE PHARMACEUTICAL ASSOCIATION

Demonstrating a clear understanding of the reasons for opposing expansion of Federal control of the lives of all Americans through adoption of some form of social security medicine, the Arkansas Pharmaceutical Association, at its annual convention in Little Rock, May 17th, adopted the following excellent resolution opposing the King-Anderson (H.R. 4222) Bill.

"WHEREAS, the free-enterprise system that has been the keystone of our republic and of our way of life is today under constant attack;

"WHEREAS, the institution of a Welfare State is the true goal of many who profess concern for the welfare of one group or another in today's society;

"WHEREAS, both major political parties are currently advocating socialistic plans designed to make the federal government responsible for the health and hospital care of citizens over age sixty-five;

"WHEREAS, all such proposals substitute the principles of socialism for the principles of individual responsibility and self-determination, and inherent within them are the seeds of destruction that will ultimately affect all our freedoms;

"WHEREAS, the statutory recognition of groups and classes of citizens for the purpose of bestowing special benefits from tax revenues is contrary to our precepts of government and anti-American in its basic tenets; and

"WHEREAS, whatever problems of medical care that may exist among the aged population can best be met, adequately and without recourse to socialistic concepts, by adherence to two historic American principles, namely, free-enterprise and state and local responsibility for indigent persons;

"NOW, THEREFORE BE IT RESOLVED, that the Arkansas Pharmaceutical Association hereby records its unalterable opposition to any and all socialistic schemes for the solution of health care

problems and urges upon members of the Congress that they remember, in this important matter as in all matters coming before them, that their primary responsibility is to preserve and defend the Great Republic created by our Constitution;

"AND ALSO, BE IT RESOLVED, that our fellow Arkansans, and all Americans who would resist the continued encroachment of paternal federalism on our rights and liberties, are urged to lend their support to the solving of the problems of the aged, the indigent, or any other of our citizens, within the framework of our Constitutional Republic and without recourse to divisive class legislation or other socialistic ideologies;

"AND BE IT FURTHER RESOLVED, that copies of this resolution shall be printed and distributed to all members of the Arkansas Congressional Delegation."

The adoption of the resolution is a fine example of cooperation and interest of the Pharmaceutical Association with the medical profession in its fight to defend the progress of medical science and protect patients. Other resolutions adopted by the convention recognized Mr. Storm Whaley's efforts in solving the problems of the University of Arkansas Medical Center, recorded the association's approval of House Joint Resolution calling attention to accidental poisoning and a resolution deploring the effort by Congress to impose the use of generic named products on physicians and pharmacists.

The following officers were elected to serve for the ensuing year:

Mr. M. H. Rosen, Pine Bluff, President

Mr. Leon Holsted, North Little Rock, First Vice-President

Mr. Harold Hesterly, Camden, Second Vice-President

Mr. L. D. Horne, North Little Rock, Treasurer

Mr. Joe Harris, Fort Smith, Chairman of Executive Council

Mr. William G. Smith, Little Rock, Executive Secretary

Tired Blood

ALFRED KAHN, JR., M.D.

Effective medical leadership is necessary to solve one of the harassing problems of medical practice in the larger communities — too many night meetings. The busy physician is not asked but is required after a full day of practice to return to various night meetings, three to five or more times per month in a larger city. The patient who followed an equivalent schedule would receive a stern injunction from his family doctor.

Perhaps, the fundamental issue here is, what is best for organized medicine in the broadest sense. A physician bored by too many meetings is only a half hearted participant in the affairs of his hospital staff and his county medical society. A tired, rushed physician is not a good judge of his patients' needs and welfare.

One well attended, interesting meeting per month could do great good from a scientific and organizational point of view. This immediately begs the question of how are the administrative problems of the hospitals and societies to be solved. One workable approach would be to make the bulk of the strictly administrative meetings optional but open to all who wish to attend. Those attending these meetings would actually run the organization, but at the same time non-attenders would not be deprived of their membership.

Assuming there were one night meeting per month, the important administrative

problems could be brought up and there would still be time for a scientific session.

The difficulty with accomplishing the condensation of meetings is the physician's passivity. A determination to accomplish this could make it possible. The principal obstacle is the unyielding position of the hospitals, and this stems in turn from the accreditation authorities. Organized medicine has set up Accreditation Boards, truly a valuable service, but in so doing did not contemplate becoming the slave of a rigid, inflexible set of rules. The rules of accreditation should be sufficiently flexible to adapt to local needs. It is unreasonable to feel that a single unvarying set of regulations is best suited to every community in the country.

Instead, the accreditation committee should at the request of a local county medical society send representatives at the county's expense to work out a satisfactory consolidated program suitable to that community's needs; this should be based on a flexible but good regulatory program.

The medical societies should demand a reasonably flexible set of hospital regulations through their state medical society and the American Medical Association.

This in turn would solve the physician's unreasonable problem of "Well, how many night meetings do I have to attend this month?"

The Care of the Patient*

The care of the patient, according to the late Francis W. Peabody, consists in caring for the patient. In its devotion to this principle the medical profession, no doubt with the weight of logic on its side and, it may be hoped, with reasonable arguments only, expressed with convincing dignity, is opposing any new eldercare program linked with Social Security.

Sometimes lacking finesse in its public relations, however, the organized profession persists in basing its opposition to the Administration's proposed federal program for medical care at least partly on the threat of "socialized medicine." This undoubtedly represents a real and sinister danger, but it is a confusing term at best, in these days of social reform, and unfortunately it has a single connotation with many laymen, meaning only that the doctors are running for their muskets to defend their financial stake in the practice of medicine.

Of course, this is an erroneous interpretation, but since it is a fixed idea with many otherwise informed laymen that the cry of socialization is the rallying signal of the medical trade union, it seems that the term might be used with more caution than has often been the case. It may be about time, in fact, for the profession to restrict itself in its public utterances to upholding the unarguable principle of providing the best possible care for the greatest number of persons regardless of the method of payment, if any. The majority of physicians, it is certain, know that their own best interest lies in convincing the public that service, with remuneration as a secondary consideration, is their motivating force. This ideal should be made a reality in the minds of all people.

Some of the evil that words do is the result of changing meanings and improper interpretations; it would be well to bear

in mind that regardless of whether "social" implications are good or bad, the various forms of the word spring from the Latin "socius"—an associate or ally or neighbor. There must be many persons, physicians, as well as laymen, who are groping for the right expression of man's obligation to his neighbors—of sharing with others his enlightenment as well as his prosperity and the benefits of living in certain forms of society. "Socialism" and "socialization" have long had an unpleasant connotation among conservative persons, although concepts of these terms are now accepted that were rejected a few decades ago. Perhaps the acceptance of society's obligations to all its members would be more palatable if the term "social consciousness" were generally adopted.

There is a widespread conviction that some system of providing medical care for needy elderly persons should be developed, and the last Congress, as a final piece of business, selected one for trial. This method, in the form that was established for it or with modifications, may turn out to be the best that should be attempted at present. Certainly, it has not yet had the trial that it needs before any new experiment is substituted for it.

This much is a sad probability, that the louder the protests from the medical profession may be in opposition to any proposed health legislation the more the profession is going to be suspected of trying to protect its own interest in the provision of medical care. Any clamor about "socialized" medicine is a certain indication to many persons that "organized" medicine is still trying to maintain a status quo favorable to itself. This suspicion will be allayed by a frank and friendly and constructive attitude, not by alarm reactions, and by an open-minded, sincere and temperate appraisal of the relative benefits to the patient of any system that may be considered.

*Reprinted from *The New England Journal of Medicine*, March 30, 1961.

MEDICINE IN THE NEWS

COMPARISON OF TUITION LEVELS
BETWEEN 1941 AND 1959 FOR 42
SELECTED SCHOOLS IN TERMS
OF ACTUAL DOLLAR AMOUNTS
AND IN TERMS OF THE 1947-49
STANDARD DOLLAR
EQUIVALENTS

Tuition has always been a major source of income for U. S. medical schools. As such, it has been necessary frequently to increase tuition charges in recent years so that this source of income could retain its relative position of importance in the financial structure of medical education.

Relating to the period from 1941 to 1959 this Datagram discusses these increases in tuition—including the variations which occurred with respect to private and public schools — from two points of view: 1) in terms of actual dollar amounts, and 2) in terms of the 1947-49 standard dollar equivalents.

Table 1 shows the percentage increase in average tuition between 1941 and 1959 for a selected number of schools including 26 private and 16 public four-year medical institutions.*

Average tuition for private schools increased from \$482 to \$1,175. This represents a percentage increase of 144%. Average non-resident tuition of public schools increased from \$396 to \$948, or 139% ; resident tuition from \$239 to \$541, or 126%.

As previously stated in Datagram, Vol. 2, No. 8B for February, 1961, the purchasing power of the U. S. dollar was subject to great variation during the period under consideration. To obtain a more meaningful comparison of tuition charges between 1941 and 1959, adjustment to a standard dollar becomes necessary. The Department of Labor, Bureau of Labor Statistics, selected one hundred cents as a dollar equivalent for the base period 1947-49. The 1947-49 dollar equivalents for each of the years under consideration were determined by multiplying the actual tuition charges by the reciprocal of the appropriate consumer

Percentage Increase in Average Tuition Between 1941 and 1959 for 26 Private and 16 Public Four-year Medical Schools in Terms of the Actual Unadjusted Dollar Values and In Terms of the 1947-49 Standard Dollar Equivalents

Type of Schools	In Terms of Unadjusted Dollar Values			In Terms of 1947-49 Standard Dollar Equivalents		
	1941	1959	% Increase 1959/1941	(1) 1941	(2) 1942	% Increase 1959/1941
PRIVATE SCHOOLS	\$482	\$1,175	144%	\$766	\$944	23%
PUBLIC SCHOOLS:						
Non-Resident	396	948	139%	629	762	21%
Resident	239	541	126%	380	434	14%

- (1) Reciprocal of consumer price index \$1.59
- (2) Reciprocal of consumer price index \$.803

SOURCE:
Tuition for 1959 from J.A.M.A. Vol. 171 pp. 1514-1515 (Nov. 15) 1959
Tuition for 1941 from personal communications with individual deans

Table 1

Submitted by the Division of Operational Studies of the AAMC, 2530 Ridge Avenue, Evanston, Illinois.
*These selected schools constitute a representative sample and are the same ones which are included in the comprehensive study, "Financing of Medical Education", now in progress at AAMC headquarters.

price index as determined by the Bureau. Referring again to Table 1, this effect of adjustment to a standard dollar in making meaningful comparisons of trend data is dramatically revealed. The percentage

FEATURES

increase of 144% in the average tuition level of private schools, based on actual dollar amounts, becomes 23% when based on the standard dollar equivalent. The increase in average non-resident tuition of public schools reduces from 139% to 21%; that for resident tuition from 126% to 14%.

Figure 1 provides a graphic presentation of tuition levels for public and private schools in 1941 and 1959. Here tuition levels are represented in 1947-49 standard dollar equivalents. (For purposes of reference the average of actual unadjusted tuition for each category is shown at the lower margin of the chart and is marked with an asterisk. Numerals beside the horizontal bars in the chart indicate the number of schools having identical tuition charges.)

It is notable that, although the tuition of private schools shifted generally to higher levels between 1941 and 1959, the range

between the highest and lowest level remained more or less unchanged.

On the other hand the range between the highest and lowest level of non-resident tuition in public schools narrowed considerably in 1959 over the earlier year—especially if the one high tuition charge is excluded. The range for resident tuition in public schools also narrowed but to a lesser extent.

In a current comprehensive study of medical school financing, it has been determined that between 1941 and 1959 tuition for **public schools** dropped from second to fourth position of relative importance as a source of income for basic operations. This fact can be attributed, to some degree at least, to the minimal changes in the levels of resident tuitions as revealed in this chart.

In 1941 tuition stood in second position of relative importance as a source of income for **private schools**. It retained the same position in 1959.

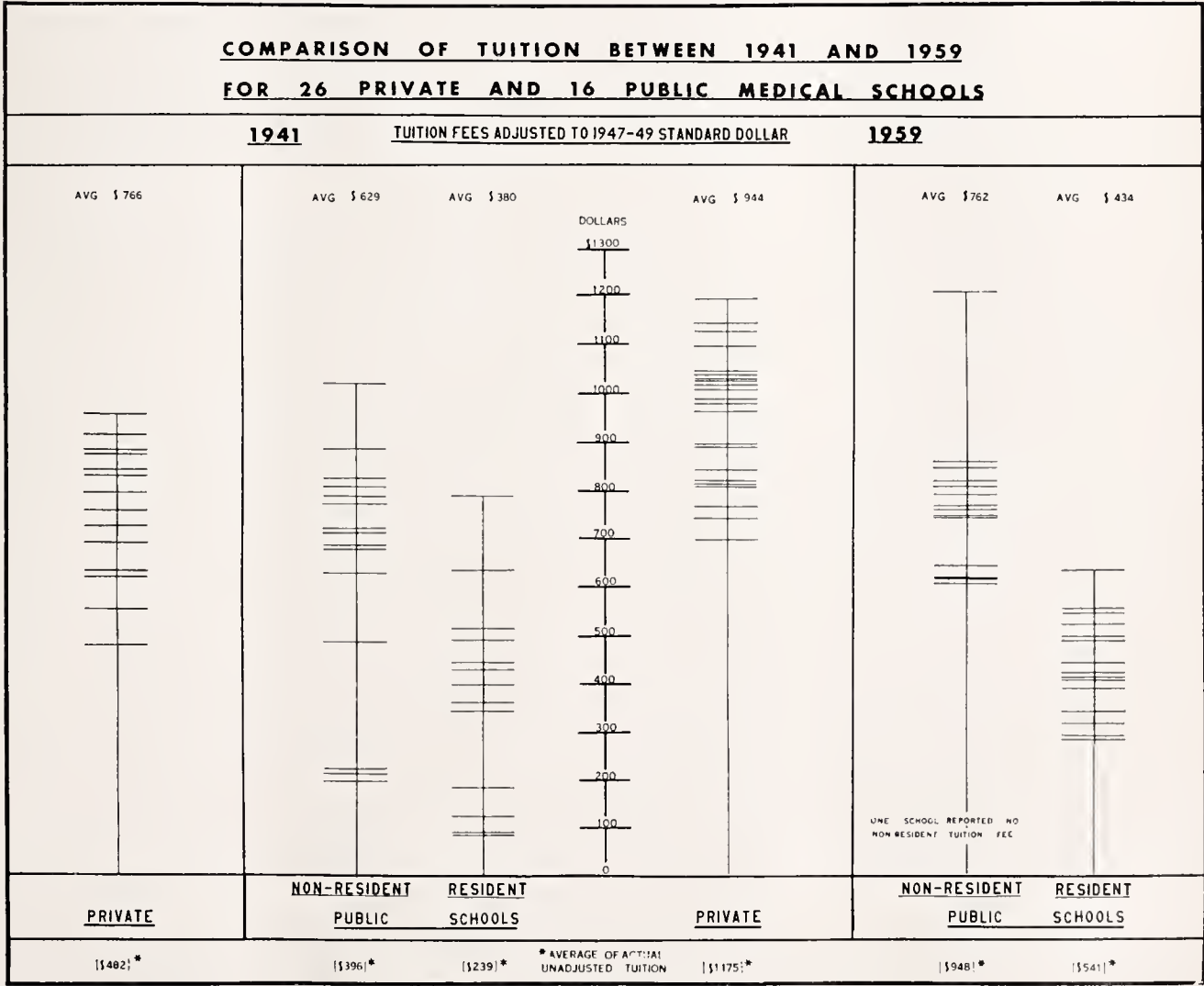


Figure 1

Regional Blood Program

The Faulkner County chapter of the American Red Cross voted to participate in a regional blood program being drawn up in their area.

The vote came after the chapter met with Claud Curtis of St. Louis, Missouri, regional field representative for the Red Cross, and Henry H. Moore of Little Rock, regional manager for Veterans Administration to discuss the program.

The approval of the Faulkner County Medical Society, Memorial Hospital Association and the Faulkner Health Department was received by the chapter to go ahead with the blood program. Details will be announced later, a Red Cross spokesman said. Mrs. E. O. Christopher was named chairman.

Silver Tea Given at Benton Unit Of State Hospital

Approximately 600 persons attended the annual silver tea given in connection with Hospital Day at the Benton unit of the State Hospital. Visitors from many states, all sections of Arkansas and Saline County attended the event which was sponsored by the hospital auxiliary and held in the chapel.

National Hospital Week Observed

Over 300 people of the Brinkley area visited Mercy Hospital when open house was held as one of the observances of National Hospital Week.

These visitors were given conducted tours of the hospital and were served refreshments by the wives of the doctors on the staff. People from Clarendon, Helena, Brinkley, Moro, Hunter, Forrest City, McCrory, Cotton Plant, Stuttgart, Wheatley, Biscoe, DeValls Bluff and Houston, Texas signed the guest register.

Dr. James Taylor Speaks at Seminar

"Moderation in all things" is a deterrent against coronary thrombosis, a University Medical Center physician said. Dr. James S. Taylor, professor of medicine, was one of five lecturers during a general postgraduate seminar that preceded an afternoon program designed around the medical center's preceptorship program.

Preceptors are physicians who take medical school students for practical training during the time between the student's junior and senior years.

Dr. Taylor reported to the preceptors who gathered for the seminar on a recently-completed study he has made jointly with Dr. Richard V. Ebert, head of the medical center's department of medicine, and two members of the staff of the Veterans Administration Hospital, Dr. Owen W. Beard and Dr. Harold R. Hipp.

He said that the death rate from coronary thrombosis is relatively sharp immediately after onset of the condition, but that from six months on, there is a good survival rate that changes very little with the passing years. The study embraced a five-year period.

Persons in the under 40 and in the 40-49 age groups showed a better survival rate than did older persons. Dr. Taylor said the study indicates pre-existing conditions involving stress and strain have a bearing on the condition.

He said exercise and return to work is a good idea for the coronary thrombosis victim, that this should be encouraged because it can relieve the stress and strain. Five of every six coronary thrombosis victims survive.

Dr. Taylor said that the "return to work" was sound advice for persons suffering coronary thrombosis because figures indicate they will do better and live longer if they do return to properly selected work.

Others on the morning program were Dr. John T. Riggins, Jr., associate dean and assistant professor of medicine at the medical school; Dr. Masauki Hara, professor of surgery; Dr. John B. Nettles, associate professor of obstetrics-gynecology; Dr. Howard Barnhard, professor and head of the department of radiology, and Dr. Gerald T. Jansen, assistant clinical professor of medicine (dermatology).

University of Arkansas Medical Center Has Commencement

Little Rock—The University of Arkansas Medical Center observed Commencement exercises June 11 with Dr. James Payson Dixon, Ohio educator and a member of a national health advisory team as the Commencement speaker.

A total of 139 graduates in the various schools at the Medical Center received degrees. They included 82 from the School of Medicine, 24 from the School of Nursing, 22 from the School of Pharmacy and 11 from the School of Medical Technology. This year's graduation total was the largest on record at the Medical Center.

L. C. Carter of Stuttgart, chairman of the University's Board of Trustees conferred degrees while Dr. David Wiley Mullins, University President, presented diplomas to the graduates and Dr. Charles R. Henry of Little Rock administered the traditional Oath of Hippocrates to the medical graduates.

From Washington Office A.M.A.:

The Month in Washington

The American Medical Association supported the Kennedy Administration's proposal to provide \$750 million in matching funds for construction of medical, dental, public health and osteopathic schools.

In a letter to Sen. Lister Hill (D., Ala.), Chairman of the Senate Labor and Public Welfare Committee, Dr. F. J. L. Blasingame, Executive Vice President of the A.M.A., said:

"As an Association of 179,000 practicing physicians, we are vitally interested in maintaining the high quality of medical education in the United States because of its direct relationship to medical care. For over a century, the American Medical Association has been actively and effectively engaged in the improvement of medical education in the United States. It can now be said, with assurance, that medical education in this country is superior to that found anywhere else in the world. It is not a coincidence that the improved standards of medical care in the last half century saw the elimination of sub-standard medical schools and diploma mills which had been turning out graduates in large numbers. This improvement in medical education is the result of the vigorous efforts of this Association and other interested organizations.

"We strongly believe that increased attention must be given to the adequacy of physical facilities, the availability of qualified instructors and the availability of teaching material and patients for the clinical phases of medical education if

high standards of medical education are to be maintained. Any attempt to increase the number of medical students without regard to these conditions will result in a lowering of the standard of medical education. We are of the firm conviction that increase in the physical facilities available for medical education should be given priority at this time over any other federal legislation in the field of medical education.

"We believe that there is need for assistance in the expansion, construction and remodeling of the physical facilities of medical schools and, therefore, a one-time expenditure of federal funds on a matching basis, where maximum freedom of the school from federal control is assured, is justified."

The A.M.A. opposed a provision that might encourage medical schools to expand too rapidly. Dr. Blasingame said: "It is quite possible that a forced increase in freshman enrollment would be detrimental to the quality of medical education."

The Association didn't take a position on the provision of the Administration legislation that would provide federal scholarships to medical students. However, Dr. Blasingame described to the senate committee A.M.A.'s new medical scholarship and student loan programs.

From the Washington Report on The Medical Sciences, June 5, 1961:

"'WATCHDOG' GAO ADVISES MEDICARE FISCAL REFORM. General Accounting Office has protested to Congress that physicians in some states are using Medicare as a good thing. The 'watchdog of the Treasury,' as GAO is known, wants Defense Department to tighten up on negotiations of fees and settlement of claims. GAO thinks U. S. taxpayers are losing up to \$4 million annually because doctors are charging maximum-allowed fees for services to military dependents, rather than the ordinary, going fees charged to patients who foot their own bills. Interestingly, Medicare headquarters or, more precisely, the Army does not go along with GAO recommendations of administrative reforms designed to reduce doctors' billings.

"FEE SCHEDULE SAMPLING. GAO auditors selected 10 states in which the

Medicare fee schedule is distributed and they found that 93.5 per cent of doctors' claims were for maximum allowance in maternity cases (these comprise bulk of Medicare volume). In five states where fee schedules are **not** publicized, only 32.2 per cent of claims were for the maximum. The report does not name these five states, but the 10 in the other group are: South Carolina, Massachusetts, Arkansas, Georgia, Texas, Florida, California, Pennsylvania, North Carolina, and the District of Columbia.

"Also cited in GAO's 70-page critique: Inconsistencies in payment of medical and hospital claims, though Army rejects the proposal that one contractor be chosen for each geographical area to settle both types of claims. Tardiness in reporting terminations of eligibility. Need to simplify determination of fees for obstetrical services, including prenatal care. Shoddy execution of claims forms."

Dr. Robins Bound for Brazil

R. B. Robins, M.D., F.A.C.S. has been designated by the Board of Trustees of the American Medical Association to go to South America in September as a representative of the American Medical Association at the World Medical Association meeting September 15-20 in Rio de Janeiro, Brazil.

Huge Resources Behind Launching Of New Drug Firm

One of the most dramatic features of the June American Medical Association Meeting in New York was that it served as a launching pad for the orbiting of a new drug manufacturing enterprise. This was the introduction of Philips Roxane, Inc., to the American pharmaceutical industry.

Philips Roxane rises out of a vast network of technological operations here and abroad from which its extensive plans for pharmaceutical research and development have been drawn. In the background are a number of corporate operations with worldwide recognition and resources. Chief among these is the Philips Electronics and Pharmaceutical Industries Corp. and N. V. Philips-Duphar of The Netherlands. Philips-Duphar is one of the world's leading sources of vitamin D, and

it has since gained worldwide recognition and esteem in other areas of human medicine, and in animal and plant pharmaceuticals. Currently being developed are studies in organic synthesis and radioactive isotopes.

In completing its plans for full-scale operation, Philips Roxane has just erected a new 62,000 square foot plant at its headquarters location in St. Joseph, Missouri. Among its present pharmaceutical projects is the development of a measles vaccine, now in extensive clinical trial, and for which patent applications have been filed. Preliminary findings show that this vaccine may provide a practical method for mass inoculation against this disease. In another area, Philips Roxane has initiated clinical testing of a promising new progestational agent with which it hopes to open up a new phase in steroid chemistry.

To enhance and facilitate its research and marketing operations in this country, Philips Roxane has acquired several American affiliates. Among these is the Columbus Pharmacal Company of Columbus, Ohio which will form the nucleus for marketing in the new organization, and which henceforth will operate under the new Philips Roxane name. Another affiliate has been acquired at the location of the headquarters for Philips Roxane in St. Joseph, Missouri. This is the Anchor Serum Company of that city, which brings to the new operations specially developed skills and long experience in biological research and production.

The product scope of Philips Roxane was further extended with the acquisition of Thompson-Hayward Chemical Company of Kansas City, Missouri. This company is a leading formulator and supplier of chemicals used in feed supplements and in industry and agriculture.

ANNOUNCEMENTS

The Interstate Postgraduate Medical Association of North America Announces:

"The SCIENTIFIC ASSEMBLY" to be held in Cleveland, Ohio — November 13-16 — 1961. The Co-Sponsor is the Ohio

FEATURES

Academy of General Practice. Features will include luncheons, lectures, color television, demonstrations, and etc. For the ladies there will be a Hospitality Tea, Special Luncheon with Style Show by Halle Brothers and an illustrated lecture on "Oddity in Gems." Time for shopping and the theatre. The Annual Dinner: Illustrated lecture on the underwater adventures of Doctor and Mrs. George Crile, Cleveland under the title, "Sunken Silver". A program all will thoroughly enjoy! Cost tax deductible as part of educational conference expense. ACADEMY CREDITS acceptable for a maximum of 25 hours of category II credit by the American Academy of General Practice. All details on luncheons, hotel reservations, etc., can be secured by writing Erwin R. Schmidt, M.D., Box 1109, Madison 1, Wisconsin.

The Arthritis and Rheumatism Foundation offers predoctoral, postdoctoral and senior investigatorship awards in the fundamental sciences related to arthritis for work beginning July 1, 1962. Deadline for applications is October 31, 1961.

These awards are intended as fellowships to advance the training of young men and women of promise for an investigative or teaching career. They are not in the nature of a grant-in-aid in support of a research project.

(1) Predoctoral Fellowships are limited to students who hold a bachelor's degree. These fellowships are tenable for one year with prospect of renewal.

(2) Postdoctoral Fellowships are limited to applicants with the degree of Doctor of Medicine, Doctor of Philosophy or their equivalent. These fellowships are tenable for one year, with prospect of renewal.

(3) Senior Investigator Awards are made to candidates holding or eligible for a "faculty rank" such as Instructor or Assistant Professor or equivalent and who are sponsored by their institution. These are tenable for five years.

A sum of \$500 will be paid to cover the laboratory expenses of each Postdoctoral Fellow. An equal sum will be paid to either cover the tuition expenses or laboratory expenses of each Predoctoral Fellow. In the case of Senior Investigators, instead of the \$500, an additional 10 percent of the stipend will go to the institu-

tion to be applied to annuity programs, laboratory expenses, travel, etc.

For further information and application forms, address the Medical Director, Arthritis and Rheumatism Foundation, 10 Columbus Circle, New York 19, New York.

TENNESSEE VALLEY MEDICAL ASSEMBLY, Read House, Chattanooga, Tennessee, September 25-26, 1961. Joseph W. Graves, M.D., 109 Medical Arts Building, Chattanooga, Tennessee, Chairman. A.A.G.P. members granted ELEVEN HOURS CATEGORY ONE CREDIT for two day's attendance. A good investment! Brayten Pharmaceutical Company will sponsor a Golf Tournament at the Chattanooga Golf and Country Club on Sunday, September 24, 1961, and a cocktail party following the tournament. Please attend; there is no entry fee. Fillauer Surgical Supply Company will sponsor a Social Hour from 6:00 to 7:30 p.m., on Monday, September 25, 1961, Read House. Banquet on Monday night, September 25, 1961, in ballroom of the Read House at 7:30 p.m. Banquet Speaker — Dr. Wernher von Braun, Director, George C. Marshall Space Flight Center, National Aeronautics and Space Administration, Huntsville, Alabama. (Doctors and wives are invited to this banquet.) The Woman's Auxiliary to the Chattanooga and Hamilton County Medical Society, Inc., has planned for the wives of the doctors in attendance at the assembly, a luncheon and fashion show, and other events. The ladies are most cordially invited to attend these functions: The Social Hour and the Banquet. All information as to registration fee, hotel accommodations and banquet tickets can be obtained by writing "Chattanooga Convention & Visitors Bureau, 819 Broad Street, Chattanooga 2, Tennessee."

Obituary

Curtis Wood Chaffin, M.D. died at 10:00 o'clock Monday morning, May 22, 1961 at the Baptist Memorial Hospital in Memphis, Tennessee at the age of 80. He

was born in Itawamba County, Mississippi; he graduated from the University of Tennessee School of Medicine in 1903 and began practicing medicine at Moro, Arkansas immediately afterwards. He was a member of the Baptist Church at Moro.

Dr. John P. Fergusson, 74 of Pine Bluff died at Jefferson Hospital on May 28, 1961. He suffered a stroke and was moved to the hospital for treatment. He had been in declining health for a number of years. Dr. Fergusson attended the Arkansas Military Academy, the University of Arkansas and the University of Tennessee. He graduated from the College of Physicians and Surgeons in Little Rock in 1908.

Dr. Fergusson began his practice of medicine in 1909 in the area of Jefferson County north of the Arkansas River. At the time of his retirement in 1956, he had completed 51 years of practice. It was during 1956 that the residents of the area Dr. Fergusson had served presented a plaque to him. The plaque, presented at a celebration in his honor at Altheimer, was inscribed: "A Life of Unselfish Service to Humanity."

Organizations to which Dr. Fergusson belonged included the Jefferson County Medical Society, the Arkansas Medical Society and Robert E. Lee Masonic Lodge No. 313 at Altheimer. He was a member of the First Methodist Church in Pine Bluff.

PERSONAL AND NEWS ITEMS

Forrest Memorial Hospital To Be Expanded

Two Little Rock investment firms submitted the low bids on \$500,000 in hospital bonds to be used for the expansion of the Forrest Memorial Hospital and the construction of an adjacent convalescent home in Forrest City. The Hospital Board, meeting with St. Francis County Judge M. Darrell Clark, said the successful bid was a combined effort by the Dabbs Sullivan Co. and E. L. Villareal & Co. Four other bids were submitted.

Bentonville Has New Hospital Administrator

Bentonville's new hospital administrator, Hugh Means, took over his new job in May. He was formerly the business manager at the Springdale Hospital for three years. He replaced Mrs. Ethel Hunicutt, who resigned April 18.

\$75,000 Grant For University Medical Center

The Arkansas Heart Association has approved a five-year \$75,000 grant to a University Medical Center faculty member for heart research. The grant represents a renewal of contract to Dr. John A. Pierce, associate professor of medicine and investigator of the Heart Association, who is conducting basic research in cardiology and pulmonary diseases.

Dr. A. A. Pringos, president of the Heart Association, and Mrs. Mason G. Lawson, chairman of the Board, both of Little Rock, made the announcement. The Heart Association has extended more than \$100,000 to the Medical Center in recent years for research by Dr. Pierce, and in open heart surgery and in student summer research projects.

One of Dr. Pierce's major efforts has been in the field of pulmonary emphysema. Although primarily a disease of the lung, it frequently results in heart failure among the aged.

Dr. Pierce was born and reared in Little Rock. He is a graduate of Central High School and an alumnus of the University of Arkansas School of Medicine. He has been on the School of Medicine faculty since 1954.

Hot Springs in the News

Dr. G. C. Coffey, chairman of the Chamber of Commerce Spa Committee of Hot Springs, his committee and a number of public officials met with Dr. S. M. Blackberg, Chicago, nationally known professional medical writer, to discuss the program of promotion of Hot Springs nationally.

Dr. Coffey said the program of promoting Hot Springs and its therapeutic values was discussed at the luncheon meeting at the Arlington Hotel.

Dr. Blackberg is a practicing physician, a graduate of the University of Arkansas and well-known over the United States as

a writer of medical articles and advertisements in medical journals and allied publications.

Paragould Post-Graduate Regional Seminar Held

Thirty-five doctors from Northeast Arkansas attended the Paragould Post-Graduate Regional Seminar in Paragould. The joint sponsors of the seminar were the Arkansas Academy of General Practice, the American Cancer Society, and the UpJohn Company. A number of outstanding men spoke on the new forms of diagnosis and treatment of cancer with emphasis on early discovery.

Dr. Hesson Located At Rison

Dr. John Hesson of West Chester, Pa., has joined **Dr. W. O. Colyar, Jr.** in the practice of medicine at Rison. Dr. Hesson and his family moved to Rison about the first of July, at which time he began his practice with Dr. Colyar who has been located at Rison for the past year.

The two physicians plan to have their offices located temporarily in the Cleveland County Memorial Hospital. They plan to open a clinic and offices in the building presently occupied by the U. S. post office as soon as the post office is moved to the new building to be constructed this year. They have also stated that they plan to construct a new clinic of modern design.

Doctors Colyar and Hesson also announced that they had discussed plans for locating offices in Kingsland and New Edinburg, depending on the desires of the people of those areas.

Dr. Hesson, who is 31 years of age, is completing his internship at the Chester County Hospital at West Chester, Pa., where he has been the past year.

He is a native of Columbus, Ohio and a graduate of Little Rock High School and the University of Arkansas School of Medicine. He attended Little Rock Junior College, Hendrix College and the University of Arkansas and served two years in the U. S. Air Force. Dr. Hesson and his wife have three children.

Proceedings of Societies

S. E. Arkansas Medical Society Meets in McGehee

Dr. Dolph Crane of Pine Bluff spoke at the regular meeting of the Southeast Arkansas Medical Society, in McGehee. Dr. Crane, who practices obstetrics and gynecology, discussed some of the complications which may occur in pregnancy. A question and answer period followed Dr. Crane's presentation. Dr. Frank Padberg, Little Rock neurosurgeon, who was the scheduled speaker, was unable to attend because of illness.

Reports were made of the recent Medical Careers Programs which were held in several Southeast Arkansas High Schools. These reports were made by Dr. Lee Parker of McGehee, general chairman, and city chairmen as follows: Dr. B. Z. Binns of Eudora, Dr. Swan Moss of McGehee and Dr. Major Smith of Dermott.

8th Annual Medical Society Meeting Held at Little Rock

The eighth Annual Senior Medical Day was held in Little Rock on May 26. The annual program was co-sponsored by the Arkansas Academy of General Practice.

Its purpose was to welcome the graduating senior medical students and their wives into the medical profession and to emphasize to them the importance of the daily observance of the Medical Code of Ethics, encouraging the general practice of medicine and pointing out the advantages of practicing medicine in rural areas.

The medical students were urged to become not only good doctors, but also good citizens, participating in civic affairs to promote the well being of the people and the area in which they may practice.

The young doctors were encouraged to be active in the various medical organizations.

The University of Arkansas School of Medicine cooperated with the Arkansas Medical Society and the Arkansas Academy of General Practice, by making it possible for the students to attend the dinner meeting.

The program was supervised by Dr. Joe Norton of Little Rock, chairman of the

FEATURES

Senior Medical Day Committee of the Society.

Medical Helpers in Jackson County Organize

Medical assistants in the hospitals of Jackson County have organized under the name "Jackson County Medical Assistants Society." An installation ceremony was held during a banquet at the Razorback Grill with Mrs. Katherine Spraggins of Little Rock as the installing officer. She is president of the Arkansas State Medical Assistants Society. Officials of Blue Cross, of which Dr. Jackson is a director, also attended.

Dr. Jackson introduced the speaker as well as other guests. More than 50 persons attended, including doctors, hospital administrators and medical assistants from Tuckerman, McCrory, Jonesboro, and Batesville.

Officers of the organization, which is the tenth such county organization in the state are:

Phyllis Walden—President
Irene Roberts—President-elect
Juanita Luter—Corresponding secretary
Patsy Holloway—Recording secretary
Ruth Rice—Treasurer

Dr. Jackson, Dr. John Wright and Dr. J. D. Ashley—Advisory committee

Ouachita County Medical Society Meets

The Ouachita County Medical Society met in regular monthly dinner session Tuesday night, June 6th at the Camden Hotel in Camden. Speakers were Mr. Eugene Warren, Attorney for the Arkansas Medical Society, and Dr. Elvin Shuffield of Little Rock.

Contributions to the American Medical Education Foundation From the State of Arkansas During April 1961:

Dr. Austin Doren, Smackover	---\$ 5.00
Dr. Forney Holt, Hope	----- 2.00
Dr. Robert McCrary, Hot Springs	----- 5.00
Dr. Lon Reed, Hot Springs	----- 5.00
Ray Smith, Jr., Hot Springs	----- 5.00
Boone County Woman's Auxiliary	----- 10.00
Columbia County Woman's Auxiliary	----- 5.00
Garland County Woman's Auxil-	

-----	52.15
Pulaski County Woman's Auxiliary	----- 386.80
Ouachita County Woman's Auxiliary	----- 5.00
Sebastian County Woman's Auxiliary	----- 75.00
Sevier-Polk Woman's Auxiliary	----- 5.00
Total	----- \$560.95

Gala Meeting For Independence County Medical Society

The Independence County Medical Society and Auxiliary held their May meeting with a dinner at the Marvin Hotel. Hostesses for the evening were Mrs. Alfred Hathcock, Mrs. Meryl Grasse, and Mrs. C. G. Hinkle.

After dinner, Mrs. Glenn Keller, Auxiliary President, introduced state president, Mrs. Hershel Wilmoth, from Glenwood, and Mrs. Mason Lawson, from Little Rock, who spoke to the group. Mrs. Lawson, a past state president and national auxiliary president, is now a consultant to the Division of Field Service of the American Medical Association. She explained the benefits of the Kerr-Mills Law of medical care of the aged which will benefit 80,000 to 85,000 persons in Arkansas this year. The law became effective, as of July 1. She also pointed out the dangers of the controversial King Bill which is endorsed by the Socialist Party.

Following this, the members adjourned to the home of Mrs. Paul Gray, for a business meeting.

Periodontist Speaks To The Union County Medical Society

Dr. Robert E. Wilkins, Little Rock periodontist was the guest speaker at the meeting of the Union County Medical Society at the Rufus Garrett Hotel. Dr. Wilkins is a 1955 graduate of Kansas City University. In addition, he took a special course in periodontics from Dr. Orbin.

Hospital Measure Passed

The Independence County Medical Society has endorsed, by a vote of 11-3 a proposal to conduct a survey of hospital needs in this county.

The Society also approved a motion, by a vote of 11-3, that the endorsement of a survey did not imply that the group as a

whole favors construction of a county hospital. This action came after the Chamber of Commerce Board of Directors recently explained the idea of a county hospital here.

In other action at its last business session, the Medical Society agreed that a constitution is needed. Dr. Charles Taylor, Society president named a committee to study the matter and report at the next meeting. The Constitution Committee is composed of doctors Chaney Taylor, Alfred Hathcock, Paul Gray and J. J. Monfort.

New Members . . .

A new member of the Miller County Medical Society is **Dr. Joseph W. Sears**. He is a native of Whitt, Texas, and received his preliminary education at Texas Christian University at Fort Worth, from which he received a B.A. degree. His M.D. degree was received from the University of Texas Medical School at Galveston. Dr. Sears is now completing a residency in Pediatrics at the University of Arkansas Medical Center. After July 1st, 1961, he will be with the Southern Clinic in Texarkana.

Dr. Robert M. Bransford is a new member of the Miller County Medical Society. He is a native of Little Rock and received his preliminary education from Hendrix College at Conway, where he completed three years premedical work. He received the degree of B.S.M. from the University of Arkansas Medical School in 1950. He was graduated from the University of Arkansas School of Medicine in 1953. Dr. Bransford's specialty is Surgery. He holds the position of Instructor in Surgery, University of Arkansas Medical Center. After July 1st, 1961, Dr. Bransford will be associated with the Southern Clinic in Texarkana.

Dr. Henry A. Crane, Jr. is a new member of the Jefferson County Medical Society. A native of Crossett, Arkansas, Dr. Crane received his preliminary education at Arkansas A & M College at Monticello from which he received a B.S. degree. His

M.D. degree was obtained from the University of Arkansas School of Medicine in 1954. Dr. Crane's specialty is Obstetrics and Gynecology; his office address is 1107 Cherry, Pine Bluff.

Dr. Martin F. Heidgen of Russellville is a new member of the Pope-Yell County Medical Society. A native of South Milwaukee, Wisconsin, Dr. Heidgen took premed at the Marquette University in Milwaukee, and received his M.D. degree from the Chicago Medical School in 1933. He is a director at St. Mary's Hospital, Russellville, and administrator at the Memorial Hospital in Elmhurst, Illinois.

Dr. Frank E. Gavlos is a new member of the Pope-Yell County Medical Society. He is a native of Wilkes-Barre, Pennsylvania, and received his preliminary education at the Wilkes-Barre High School. His M.D. degree was received from the Kansas City College of Medicine and Surgery in 1917. Prior to locating in Dardanelle 10 years ago, he practiced in Bridgeport, Connecticut, from 1917 to 1941 and North Little Rock, 1941 to 1942.

Woman's Auxiliary

Pulaski County Auxiliary Elects Officers

The Women's Auxiliary to the Pulaski County Medical Society elected new officers at a luncheon meeting. They are, Mrs. Merlin J. Kilbury, Jr., president; Mrs. Harvey Shipp, second vice president; Mrs. Robert L. Henry, recording secretary; Mrs. J. B. Cross, corresponding secretary; Mrs. Guy R. Farris, president-elect; Mrs. John McCullough Smith, first vice president; Mrs. Joe B. Scruggs, treasurer; Mrs. E. Loyd Wilbur, historian; Mrs. William A. Snodgrass, parliamentarian, and Mrs. James Newbill, publicity.

Jefferson County Medical Society Has Guests

Jim Kraft, treasurer of the Jefferson County Safety Council was the guest speaker for the women's auxiliary to the

county medical society of Pine Bluff. Hostesses for the meeting in the home of Mrs. Calvin Simmons were Mrs. Simmons, Mrs. Ed Townsend, and Mrs. W. Kirk Riley.

Mr. Kraft discussed the importance of education in water safety. Mrs. Mason Lawson of Little Rock, also a program speaker, discussed medical legislation and the responsibility of a community to see that proper legislation is passed.

Jefferson Hospital Auxiliary Officers Named

New officers of the Jefferson Hospital Auxiliary were elected. They are as follows: Mrs. James O. Bain, president; Mrs. George Barron, vice president; Mrs. David A. Shapiro, secretary; Mrs. Walter Trulock, Jr., treasurer; Mrs. Sam Levine, corresponding secretary; and Mrs. Fred Vining, historian.

Book Reviews

HUMAN PITUITARY HORMONES, Volume XII of the Ciba Foundation Colloquia on Endocrinology, edited by G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc., illustrated, pp. 336, published by Little, Brown & Company, Boston, Massachusetts.

This book is a collection of papers by authorities on this topic. As is well known, some of the human pituitary hormones do not have an identical action with animal hormones. The discussions in this book concern the fractionation of human pituitaries, certain immune studies, metabolic action of human growth hormone, studies of the sex hormones, and the studies of the trophic hormone to the thyroid and adrenal gland. The material is, of course, authoritative and important. It probably is of little interest to any group other than internists and endocrinologists. AK

THE LIFESPAN OF ANIMALS, Edited by G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P. and Maeve O'Connor, B.A., pp. 324, illustrated, published by Little, Brown and Company, Boston, Massachusetts, 1960.

The biology of aging has been a matter of acute interest to both the lay public and to the medical public. This collection of discussions discusses longevity and disease in animals. It is of interest to the special researcher working in this field. It probably has little of interest to the practicing physician. AK

PHARMACOLOGY. The Nature, Action and Use of Drugs. By Harry Beckman, M.D., Chairman, Departments of Pharmacology, Marquette University Schools of Medicine and Dentistry; Consulting Physician, Milwaukee County General

Hospital and Columbia Hospital; Editor, Year Book of Drug Therapy. Second edition. Published by W. B. Saunders Company, Philadelphia and London, 1961.

This standard reference is now in its second edition and is a complete well organized text with a better than average index. It has adequate references and a good style. It has been brought up to date in all respects. It is heartily recommended as a textbook of pharmacology to medical students. AK

Erratum

In the May issue of The Journal of the Arkansas Medical Society appeared an article, "A Common Sense Approach to the Problem of the Hazards of Radiation Fall-Out and Diagnostic Radiology" by Isadore Meschan, M.D. On page 491, column one, paragraph one, in relation to the genetic constitution of man, the normal number of chromosomes was indicated as 48. Actually 46 chromosomes are the normal number and the paragraph should read:

"In man, all of the genes are carried on 46 chromosomes, 22 of which are in identical pairs making a total of 44; the 23rd pair, however, not being identical in some individuals in the following manner:—"

Also on page 491, column two, paragraph one, in describing the various syndromes, the paragraph should read:

"In another syndrome called 'Turner's Syndrome' which occurs in an apparent female with a short webbed neck and inability to straighten the elbows, these individuals are found with no uterus. Instead of having 46 chromosomes, these individuals have 47."

The remaining portions of the article are correct.

ANSWER TO

WHAT'S YOUR DIAGNOSIS?

No clinical data is available.

DIAGNOSIS: Cleidocranial dysostosis.

X-RAY FEATURES: There are large sharply defined defects principally about the sagittal and coronal sutures of the skull with sharp margins and many wormian bones. The clavicles are absent. This disease is a congenital defect of membranous bone formation.

THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Vol. 58 No. 4

FORT SMITH, ARKANSAS

September, 1961

U.C. MEDICAL CENTER LIBRARY

SEP 26 1961

San Francisco, 22



relief from
the acute pain
of trauma



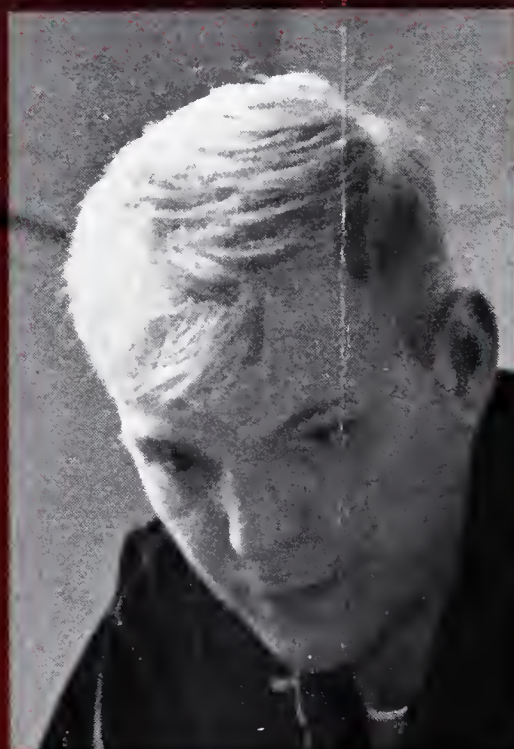
DARVON[®] COMPOUND-65

(dextro propoxyphene and acetylsalicylic acid compound, Lilly)

Usual Dosage: 1 Pulvule[®] three or four times daily.

120289

**THIS
CHESS
PLAYER
HAS
EPILEPSY...**



With proper medical management and adequate control of seizures, epileptic persons may lead productive, functioning lives.^{1,2} To implement this goal, many clinicians have come to rely on DILANTIN for outstanding control of grand mal and psychomotor attacks. For example, when DILANTIN was administered to 12 patients,³ all but one remained seizure-free in the hospital after the diphenylhydantoin blood level had reached its maximum. This patient experienced a single convulsion but had "...no further seizures during the subsequent three and

DILANTIN[®] SODIUM KAPSEALS[®] **HELPS KEEP HIS SEIZURES IN CHECK**

a half months of observation." DILANTIN SODIUM (diphenylhydantoin sodium, Parke-Davis) is available in several forms, including Kapseals, 0.03 Gm. and 0.1 Gm., bottles of 100 & 1,000.

other members of the **PARKE-DAVIS FAMILY OF ANTICONVULSANTS** for grand mal and psychomotor seizures: **PHELANTIN[®]** Kapseals (Dilantin 100 mg., phenobarbital 30 mg., desoxyephedrine hydrochloride 2.5 mg.), bottles of 100. for the petit mal triad: **MILONTIN[®]** Kapseals (phensuximide, Parke-Davis) 0.5 Gm., bottles of 100 and 1,000; Suspension, 250 mg. per 4 cc., 16-ounce bottles • **CELONTIN[®]** Kapseals (methsuximide, Parke-Davis) 0.3 Gm., bottles of 100. **ZARONTIN[®]** Capsules (ethosuximide, Parke-Davis) 0.25 Gm., bottles of 100. See medical brochure for details of administration, precautions, and dosage.

(1) Carter, S.: *M. Clin. North America* 37:315, 1953.
(2) Maltby, G. L.: *J. Maine M. A.* 48:257, 1957.
(3) Buchthal, F.; Svensmark, O., & Schiller, P. J.: *Arch. Neurol.* 2:624, 1960.

THE *Journal* OF THE *Arkansas* *Medical Society*

Owned by
THE ARKANSAS MEDICAL SOCIETY
And Published Under Direction of the Council

ALFRED KAHN, JR., M.D., Editor
1300 West Sixth Street Little Rock, Arkansas
MR. PAUL C. SCHAEFER, Business Manager
218 Kelley Bldg. Fort Smith, Arkansas
LITTLE ROCK BUSINESS OFFICE
114 E. Second St. Little Rock, Arkansas

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY
WM. A. SNODGRASS, JR.—President.....Little Rock
H. KING WADE, JR., President-Elect.....Hot Springs
M. E. BLANTON, First Vice-President.....Jonesboro
CHARLES W. REID, Second Vice-President.....Pine Bluff
L. E. DREWREY, Third Vice-President.....Camden
H. ELVIN SHUFFIELD, Secretary.....Little Rock
W. R. BROOKSHER, Secretary Emeritus.....Fort Smith
BEN N. SALTZMAN, Treasurer.....Mountain Home
C. LEWIS HYATT, Speaker, House of Delegates, Monticello
J. P. PRICE, JR., Vice Speaker,
House of Delegates.....Monticello
MR. PAUL C. SCHAEFER, Executive Secretary,
P. O. Box 1345.....Fort Smith

COUNCILORS
First District JOE VERSER.....Harrisburg
ELDON FAIRLEY.....Osceola
Second District HUGH R. EDWARDS.....Searcy
PAUL GRAY.....Batesville
Third District K. E. BEATON.....Wynne
FRED B. STONE.....Stuttgart
Fourth District H. W. THOMAS.....Dermott
T. E. TOWNSEND.....Pine Bluff
Fifth District J. L. DEDMAN.....Camden
GEORGE C. BURTON.....El Dorado
Sixth District JOHN P. WOOD.....Mena
KARLTON H. KEMP.....Texarkana
Seventh District MARTIN EISELE.....Hot Springs
J. W. KENNEDY.....Arkadelphia
Eighth District ROBERT D. JONES.....Little Rock
BILL DAVE STEWART.....Little Rock
Ninth District ROSS FOWLER.....Harrison
STANLEY APPLGATE.....Springdale
Tenth District L. A. WHITTAKER.....Fort Smith
C. C. LONG.....Ozark

The Advertising policy of this JOURNAL is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

EXCLUSIVE PUBLICATION — Articles are accepted for publication on the condition that they are contributed solely to this JOURNAL.

COPYRIGHT 1961—By The JOURNAL of the Arkansas Medical Society.

NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to the membership.

● SCIENTIFIC ARTICLES

Obstructive Diseases of the
Urinary Tract in
Children 127
Robert Lich, Jr., M.D.

Reeducational Psycho-
therapy, the Rehabilitation
of the Psychoneurotic
Patient 131
William B. Terhune, M.D.

Speech Made at Blytheville
to the Arkansas Practical
Nurses Association 138
James M. Kolb, M.D.

● WHAT'S NEW

What's New in Eye Surgery 140
John G. Watkins, M.D.

● TEACHING SEMINAR

The Diagnosis and Manage-
ment of Hypoglycemia
During Infancy and
Childhood 141
D. A. Fisher, M.D.

● FEATURES

What Is Your Diagnosis? ... 151
Public Health at a Glance ... 152
Resolution 153
Editorial

Cancer, a Major Unsolved
Problem..... 154
Alfred Kahn, Jr., M.D.

Medicine in the News 156

Announcements 161

Obituary 162

Personal and News Items ... 163

Proceedings of Societies 164

New Members 170

Book Reviews 171

Tuberculosis Abstracts 171

Letters to the Editor 174

Notice on Form 3579-P to be sent to Arkansas Medical Society, 218 Kelley Building, Fort Smith, Arkansas. Published monthly under direction of the Council, Arkansas Medical Society Vol. 58, No. 4. Subscriptions \$3.00 a year. Single copies 50 cents. Entered as a second class matter, May 1, 1955, at the post office at Little Rock, Arkansas, under the Act of Congress of March, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 1, 1918. Second-class postage paid at Little Rock, Arkansas.

The JOURNAL

OF THE ARKANSAS MEDICAL SOCIETY

PUBLISHED MONTHLY UNDER DIRECTION OF THE COUNCIL

Volume 58

SEPTEMBER, 1961

Number 4

Obstructive Diseases of the Urinary Tract in Children*

ROBERT LICH, JR., M.D.**

The importance of obstructive lesions of the urinary tract has long been appreciated. However, their pre-destructive detection has eluded the diagnostic acumen of the urologist. In other words, we have found it necessary to base our diagnosis upon the results of urinary tract obstruction rather than the detection of the incipient causative lesion. Furthermore, it is universally recognized that after the morphological changes of obstruction are apparent their functional reversibility is

inversely proportional to the degree or the extent of the obstructive uropathy. Therefore, it is not unreasonable to assume that the detection of these lesions in the pre-destructive phase, particularly in infancy and childhood, may well influence the incidence of adult renal pathology.

Some years ago we presented histologic evidence that most obstructions of the upper urinary tract were due to intrinsic rather than the heretofore assumed extrinsic factors; namely, aberrant renal vessels, fibrous bands, etc. (1). Figure 1 shows the usual picture of aberrant vascular obstruction of the ureter whereas in reality the presumed obstruction is due to

*Read before the Arkansas Medical Society, Pine Bluff, Arkansas, April 18, 1960.

**Professor and Chairman of the Section on Urology, Department of Surgery, University of Louisville School of Medicine, Louisville, Kentucky.

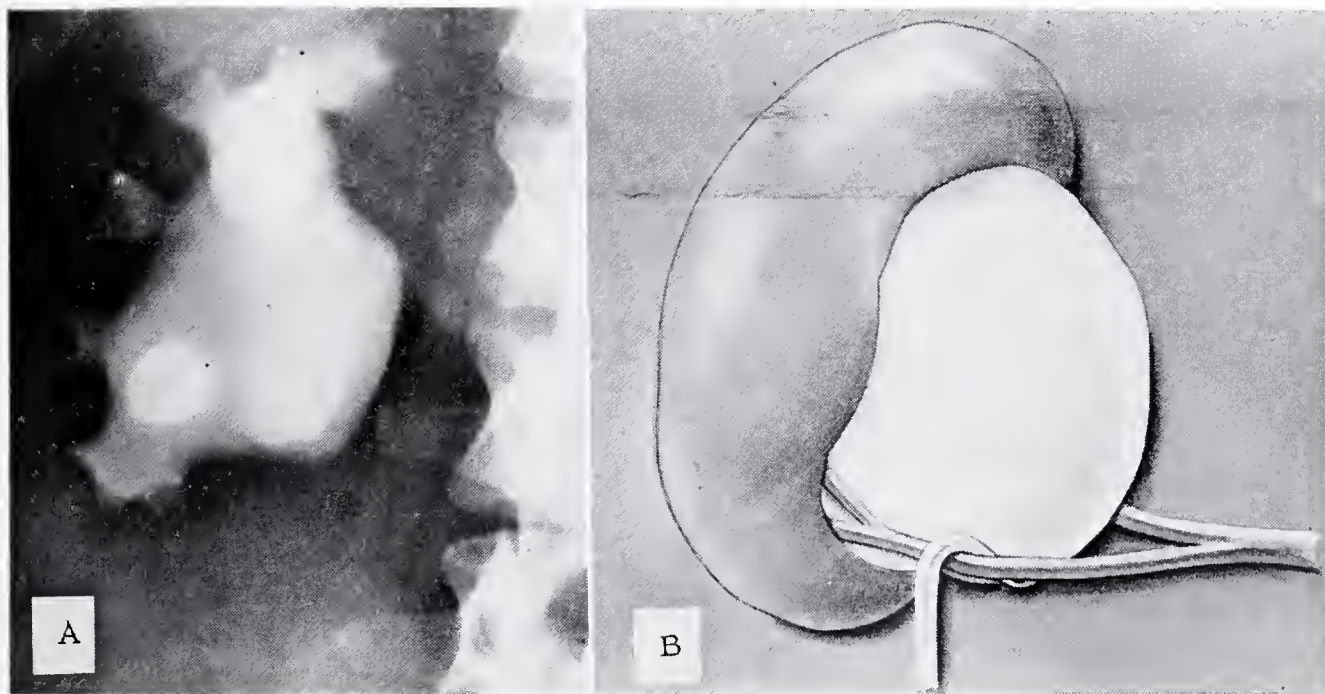


Figure 1

(A) Typical radiographic "kettle drum" renal pelvis of presumed aberrant renal vessel obstruction.

tion along with the drawing (B) of the operative appearance.

pelvic dilatation and clinically insignificant secondary vascular angulation of the ureter. The true cause of obstruction being congenital intrinsic ureteropelvic valves (Figure 2). These valve-like struc-



Figure 2

Intrinsic ureteropelvic valves; the actual cause of obstruction in Figure 1.

tures project toward the renal pelvis preventing antegrade urine flow, but not obstructing the retrograde introduction of a ureteral catheter.

The early detection of these lesions is not always simple. However, vague back pain, abdominal discomfort or symptoms without substantiating gastro-intestinal pathology should suggest the possibility of an upper urinary obstructive uropathy and initiate a complete urologic survey. This simple expedient has given us the opportunity to correct such pathology before irreparable renal damage has occurred. The early diagnosis of upper urinary tract uropathies is most often dependent upon their consideration.

The early detection of bladder neck obstructions has always presented a diagnostic problem. In marked obstructions with associated trabeculation of the bladder and particularly with secondary hydronephrosis the diagnosis is cystoscopically apparent. However, by this time there exists an undesirable degree of irre-

versible renal dysfunction.

Morphological changes of the bladder and bladder neck must of necessity be magnified by concomitant dysfunction. It is for this reason that any diagnostic method which will depict early changes must of necessity visualize both structure and function. In view of this basic premise we have devised a method of voiding cystourethrography which affords multiple momentary radiographic spot films demonstrating the combined effects of structure and function of the vesical neck and proximal urethra. This permits the diagnosis of bladder neck obstruction in its incipency before irreversible changes in any portion of the urinary tract become manifest.

The significant pre-obstructive sign of vesical neck obstruction, as demonstrated by this method of cystourethrography, is dilatation of the proximal urethra in the immediate vicinity of the vesical neck whose caliber is relatively reduced. The amount of dilatation of the urethra is proportional to the degree of vesical neck obstruction. We have coined the term "acorn deformity of the urethra" since it clearly describes the abnormality especially in its



Figure 3

Congenital bladder neck obstruction with the associated characteristic proximal urethral dilatation.

pronounced form. This finding of urethral dilatation precedes ureteral reflux and we have visualized this lesion in infants as early as two weeks of age.

Figure 3 shows a voiding cystourethrogram typical of bladder neck obstruction. The proximal urethral dilatation or "acorn deformity" is shown in association with the relative vesical neck contracture. In contrast to this picture Figure 4 shows a



Figure 4

Normal voiding cystourethrogram.

normal voiding cystourethrogram with its undisturbed funnel shaped vesical neck and urethra.

This procedure for the early detection of vesical neck obstruction embodies the attributes of sensitivity, simplicity, dependability, safety and accuracy (3). However, in the execution of this technique it is mandatory that the details must be observed meticulously. The study is made under the x-ray image intensifier which affords a minimum of radiation exposure to the patient in spite of the fact that multiple films may be taken revealing not only the vesicourethral region, but any concomitant changes in the upper urinary tract.

The bladder is filled, per catheter, with 15 per cent Hypaque¹ until the patient

experiences a marked urge to void; or in the instance of infants, until there is an initiation of detrusor response. The filling of the bladder is monitored by the x-ray image intensifier and the mid-and upper urinary tract is repeatedly scanned for the possibility of ureteral reflux or vesical diverticula which might appear during this period of vesical filling.

After the catheter is removed the patient is instructed to void, or in infants if micturition is not spontaneous, it is initiated by suprapubic pressure. At the moment that urethral filling begins several spot films are exposed throughout the period of voiding. The primary interest being to record the vesical neck and proximal urethra during the height of intra-urethral pressure. This latter point is of extreme importance since it is only during this period that variations in the vesical neck and proximal urethra are positively indicative of vesical neck obstruction. During the act of voiding the upper urinary tract is scanned to visualize the possibility of ureteral reflux. The bladder is also observed for diverticula which may fill only during the voiding period. Ureteral reflux like obstruction of the bladder neck, varies in degree and duration; i.e., it may occur during the mid-portion of voiding and completely disappear at the conclusion of micturition or it may be present after the completion of voiding and remain for a variable period of time.

At the conclusion of the voiding films the patient is instructed to empty the bladder completely in the privacy of a bathroom following which a final film is made to record residual contrast medium or persistent ureteral reflux. The amount of retained contrast medium is often proportional to the degree of vesical neck obstruction and a significant amount may be retained which is not apparent on catheterization. The existence of residual urine rather than the amount is the factor of importance in recurrent or persistent urosepsis.

The importance of a normal funnel-like bladder neck and urethra is particularly interesting since in normal children we had not a single instance of post-catheter infection. However, in the group that revealed an abnormal bladder neck we experienced post-catheter infections repeat-

¹Supplied through the courtesy of Winthrop Laboratories.

edly. It may be that the catheter is not nearly so treacherous unless there is in existence bladder neck pathology which to our previously available diagnostic methods has not been evident. It is of further interest that we have visualized this obstructive lesions in adults suffering with repeated urinary tract infections.

Open surgical correction of these individuals' bladder neck contractures by interposing a section of normal bladder and dividing the posterior vesical neck hyperplastic muscular tissue has in each instance afforded an excellent post-operative result and freedom from continued or intermittent episodes of urosepsis.

The probable cause for these instances of bladder neck obstruction is congenital and it would seem reasonable that continued vesical dysfunction, with or without infection, may greatly magnify the initial disturbance. Obviously in the face of these findings and operative results the answer to recurrent urosepsis must lie in the detection of causative lesions since antibiotics or chemotherapeutic agents can afford, at most, only specific urinary tract sterilization with unavoidable recurrence at the time of another bacterial invasion. Similarly, that surgical correction alone can consistently successfully overcome an obstructive uropathy has been long demonstrated in the upper urinary tract. Dilatation of the urethra or ureter are on occasion successful, but only in instances of superimposed morphologic obstruction (i.e., fibrous contractures) where the le-

sion is not of intrinsic functional importance.

CONCLUSIONS

In the light of these findings both diagnostically and therapeutically it would appear that entire picture of recurrent and chronic urinary tract infections should be reexamined. We have found adults suffering with recurrent urosepsis demonstrating bladder neck obstruction and dysfunction not unlike the children reported herein. In these patients too there occurred a similarly satisfactory postoperative result. This study is being extended in our institution and it would appear with very significant and gratifying results. The recent report of Hodson and Edwards (4) would seem to correlate well with our findings in the lower urinary tract.

SUMMARY

The importance of obstructive uropathies in children is discussed. A method for the detection of even incipient vesical neck obstruction is outlined. The need for a reevaluation of chronic or recurrent urosepsis is suggested by these findings.

Bibliography

1. Lich, R., Jr. and Barnes, M. L.: Clinicopathologic study of ureteropelvic obstructions. *J. Urol.*, 77:382-387, 1957.
2. Lich, R., Jr., Maurer, J. E. and Barnes, M. L.: Pyelectasis. *J. Urol.*, 75:12-16, 1956.
3. Lich, R., Jr., Howerton, L. E. and Davis, L. A.: Vesicourethrography. *J. Urol.*, in press.
4. Hodson, C. J. and Edward, D.: Chronic pyelonephritis and vesico-ureteric reflux. *Clin. Radiology*, 11:219-231, 1960.

REEDUCATIONAL PSYCHOTHERAPY, The Rehabilitation of the Psychoneurotic Patient*

WILLIAM B. TERHUNE, M.D.**

Reeducational Psychotherapy is effective in the treatment of the psychoneuroses, useful in psychosomatic disorders, and helpful in borderline psychotic disturbances. Reeducational psychotherapy steers a middle course in the treatment of emotional illnesses, avoiding the overly psychological as well as the overly somatic approach.

It is based on certain fundamental concepts. *First*, the belief that people inherently wish to be well, are capable of attaining a workable daily philosophy and must develop a satisfying, spiritual way of life. *Second*, the belief that man can increase the use of intelligence by exercising choice, and therefore need not be entirely at the mercy of instincts and subconscious mechanisms. *Third*, the belief that each individual possesses fundamental personality assets which, when employed, bring to pass rehabilitation and regeneration.

The principles and techniques of psychiatry, as well as the approaches and emphases on psychotherapy, are not uniform throughout the world. The elements are influenced by variations of medical progress, by cultural forces and by economic factors. For example, England favors what might be called "social psychiatry," France focuses largely on descriptive psychiatry, and the United States emphasizes individual psychodynamic psychiatry.

Within this frame of reference there are various and sometimes conflicting schools of psychiatry, each with its rationale, approach, and techniques. In the United States the three principle groups are: (1) directive psychotherapy, (2) physiological and chemical therapy, and (3) the various forms of psychoanalysis.

Reeducation is essentially directive psychotherapy. But more than that, it is eclectic and flexible, in that it accepts and incorporates into its procedures scientific

principles of proven value from all psychiatric disciplines. It is directive psychotherapy, grounded on Freudian principles, which may utilize physiological methods of treatment with certain precautionary restrictions.

During thirty years of psychiatric practice, I have used reeducation in treating over fifteen thousand patients, both adults and children. The results, I am convinced, justify the widespread use of this form of psychotherapy in treating the psychoneuroses and certain other emotional illnesses.

A word of clarification is in order here, as to the ways in which reeducation does not adhere to strict Freudian doctrine.

The reeducational psychiatrist does not believe that the only way to cure or help patients is to allow them to talk endlessly about their difficulties. The process of ventilation, or abreaction, can often be misleading or harmful. Too much "talking out" of difficulties for many hours, over a long period of time—indeed, sometimes for years—focuses the patient's attention on his troubles and on himself as a sick person. And this is precisely what we are trying to teach the patient not to do.

The reeducational approach puts sex in proper perspective. It holds that sex is good when it is part of a good life, but that it seldom, if ever, is in itself a cause of emotional illness. Another point of difference with Freudian doctrine is that reeducation does not believe that, when repressed, anger contributes to emotional illness and that the cure lies in expressing such anger. On the contrary, it believes that it is usually a mistake to express anger in its primitive form. Together with fear, anger is the most destructive force in life. The antidote is not to give vent to it, but to understand it, know how to meet it, and conquer it with love. It does not necessarily hold that all neurotic tendencies are the result of the usual home environment of practically all children. It does not place all the blame on the par-

*Presented at the 12th Annual Institute in Psychiatry and Neurology Feb. 25-26, 1960, Little Rock, Ark.

**New Canaan, Connecticut. Medical Director, The Silver Hill Foundation, Inc.; Associate Clinical Professor of Psychiatry, Yale University School of Medicine.

ents. Unlike Freudian therapy, reeducation, since it is directive therapy, expects the psychiatrist to take an active role in instructing and guiding the patient. It calls upon the patient to participate actively in treatment through close association with the doctor. Psychotherapy is not a one-way street; it is effective only when both the patient and the therapist contribute to it.

This concept of close association touches upon the matter of Freudian transference. The reeducationist believes that the patient needs a close and enduring friendship with his doctor, something much more meaningful to him than the ordinary doctor-patient relationship. Hence reeducation encourages social contacts between the psychiatrist and his patient, instead of setting up an artificial barrier, as the Freudian analyst does.

With respect to physiological and chemical methods of treatment, reeducation has recourse to these forms of therapy only when they are absolutely essential. Physiological intervention frequently makes the patient inaccessible to psychotherapy. Chemiotherapy often causes the individual to depend upon drugs instead of progressively building character and using intellect in learning techniques of efficient living.

Thus far, I have tried to give you a bird's eye view of some of the principles of reeducation. Let us look for a moment at its historical development.

One might well say that reeducation has existed since man first attempted to help himself and others find an emotionally healthy and constructive way of life. On a more factual basis, reeducation as a form of psychotherapy entered medical history in the late nineteenth century when DuBois used it successfully in Switzerland. Following this beginning, DeJerine of Paris improved the techniques, and the elder Janet advocated and used this method.

In this country, S. Weir Mitchel also used reeducation, although this is seldom realized since he is better known, medically, for his extensive writings on the physiological approach to the neuroses. The first organized attempt to formulate the technique in this country was made by Austin Riggs, who in 1916 wrote a series of pamphlets designed to enlist the cooperation of the patient in his own re-

habilitation. A group of physicians associated with Riggs used reeducation intensively. They reported in the literature that it was a satisfactory method of treating the psychoneuroses and some other psychiatric disorders, but they did not focus on describing the method or encourage its use by other physicians.

Today, nearly all psychiatrists give lip-service to the reeducational approach, but relatively few are familiar with its techniques or trained in their application. On the surface, reeducation therapy appears to be a matter of simple common sense. Actually, its effective use requires intensive training for a period of two or three years, over and above the usual training period in psychiatry. Just as the psychoanalyst must himself be analyzed before he can use psychoanalysis as a therapy, so the reeducationist must himself be "re-educated" and well-adjusted. He must be thoroughly grounded in the principles and techniques.

These must be *actively taught* to the patient, not merely presented to him. Unless the psychiatrist practicing reeducation has full command of the subject and a deep understanding of its principles he may do the patient more harm than good. He may actually strengthen the psychoneurotic's tendency to accumulate medical information and use it to fortify his position as an ill person. The psychiatrist, to be effective, must have training, skill, knowledge, and experience in using this form of psychotherapy. And, as in all forms of psychotherapy, he should be a physician of absolute integrity.

I have indicated that reeducation is especially effective in the treatment of the psychoneuroses. Some clue to why this is so may be found in examining the characteristic difficulties encountered in this type of emotional illness, and then in tracing how these difficulties are alleviated by reeducation therapy.

As you know, many causal factors are involved in the psychoneuroses. They vary in different individuals and under different circumstances. Moreover, the psychoneurotic patient seldom reveals all the factors that are at the root of his illness, even if he is aware of them. To do so would shatter his ego and intensify his illness instead of alleviating it.

Despite the fact that it is impossible to

pin-point all of the causes of the psychoneuroses and to list them in orderly fashion, some elements appear in practically all cases, and may be considered common denominators. These are:

1. Fear, with accompanying guilt feelings;
2. Introverted sensitiveness;
3. Ignorance of basic psychological principles necessary for emotional health;
4. Unresolved conflicts;
5. Unwillingness to relinquish the secondary gains of illness, and hence lack of motivation for recovery;
6. Unwillingness or inability to come to grips with situations on an either-or basis and thus make clear-cut decisions—that is, no techniques for adaptation to circumstances;
7. Absence of goals and ideals, or, to put it another way, no basic guiding philosophy of life.

Of all these elements, fear is the all-pervading one. It is the greatest single cause of the psychoneuroses. Since it never completely subsides in the psychoneurotic, he must accept it and learn to live with it. He can be taught how to use his feeling of fear as a challenge and a stimulus for courageous living, instead of as an alibi to justify and perpetuate illness.

How does reeducation treat these common elements of psychoneurosis, how does it remove them or lessen them? Framing the question another way, why does experience show that reeducation is the preferred method of psychotherapy for the psychoneuroses? I shall try to answer this question by presenting the fundamental therapeutic principles of reeducation. They will show clearly, I believe, the usefulness of this method of psychotherapy in treating the psychoneuroses.

1. Reeducation makes it possible for the patient to obtain emotional release through limited ventilation. The term *limited* means that ventilation is used to the extent that it relieves the patient and strengthens his ego constructively, but not to the extent of perpetuating preoccupation with his own troubles and himself. A fruitful result of ventilation within these limits is the development of empathy and rapport between the doctor and the patient.

2. The patient's confidence in himself and in relation to other persons is developed through the support and constructive suggestions given to him by the physician. I have already stressed the importance of the patient having confidence in his physician. From this feeling he can progress, under guidance, to confidence in himself. From firm belief that he is sick and weak he can pass to conviction that he is fundamentally sound; or, let us say, conviction that he is capable of becoming so.

3. The patient's latent capacity for using his intelligence and developing self-discipline is mobilized through didactic teaching. He learns that he need not be the victim of his emotions. Instead, he can direct and use them constructively. This does not mean that he is taught to repress or inhibit his emotions. Rather, he is taught to recognize and understand them and to make his emotional drives work for him rather than against him.

4. Knowledge about simple physiological and psychological facts that make for healthy functioning are given the patient. These facts dispel former ignorance, as well as some of the fears and confusions that are the fruits of ignorance.

5. A balanced life is established for the patient while under treatment, with a regime of work, exercise, play, and rest adapted to individual needs. This regime provides the individual with a guide for living which must be carried over, with modifications, into life after the period of intensive treatment.

6. The patient is assisted to develop social relationships and new interests. The emotionally sick person is withdrawn; he is preoccupied with his troubles, symptoms and himself, and therefore lives in a restricted world. Through learning to establish meaningful relationships with other people, to look constantly for new interests, such a person discovers that life need not be an ordeal but can become an interesting, rewarding adventure.

7. The emotionally ill person is highly suggestible. The doctor uses reassuring suggestion, to replace the patient's dire suggestions. The aim is to develop in the patient the capacity for constructive self-suggestion.

8. Finally, reeducation seeks to give the patient spiritual reorientation—that is, a

new purpose in life and well-defined goals. The individual is helped to develop a philosophy of life that will give him a chart to direct him, a beacon to guide him, a philosophy that will make his life meaningful.

With these fundamental therapeutic principles as a baseline, I now want to outline for you the step-by-step procedures of reeducation. Before doing so, it is necessary to emphasize one important attitude, for it pervades all the procedures of this form of therapy.

An emotionally ill person is confused and frightened. He must feel at the very outset of treatment that his psychiatrist is competent to help him. The psychiatrist, through knowledge of the patient's cultural background and major life experiences, must quickly sense the appropriate approach for a particular individual. He must be able to give both the patient and his family a feeling of security and confidence in him. He must arouse in the patient the immediate response, "This doctor recognizes that I am a worthwhile person. He is sincerely interested in helping me and he knows how to do it."

It is of the utmost importance that the patient have this feeling at the beginning of treatment, for he will then be able to progress from confidence in his doctor to confidence in himself. Only through belief in the doctor as a friend and a person who can help him can he eventually attain belief in himself, in others, and in the value of life. This is why the physician must at first encourage the patient to lean on him for support, comfort, and friendship. With these aids, the patient will be able to undertake the task of regaining his self esteem, of facing life with courage and confidence.

Let us now consider the procedures of reeducation.

The first step is to take a medical psychiatric history. In doing this, the psychiatrist expertly leads the patient to reveal facts pertinent to the clinical picture, and at the same time guards against being snowed under by irrelevant material. Many psychoneurotics tend to concentrate on trivialities, and some deliberately use irrelevant details to mislead or confuse the therapist. They are sabotaging themselves in doing this, but, remem-

ber, they have not yet developed a strong motivation for recovery. If the therapist is skillful in taking the history, if he can parry the patient's conscious or unconscious attempts to get him off the track, he will get the data needed for diagnosis and treatment. He will also strengthen the patient's feeling that he is in competent hands. Thus in a therapeutic history, treatment begins with the first question.

The second step is to give the patient a thorough physical examination, made by the physician who is treating the patient, not by another physician, as is the practice in some forms of psychotherapy. As with the history-taking, there are two reasons for this procedure. First, the psychiatrist gets the entire clinical picture at first hand, the physiological as well as the psychological problems. Second, the patient's confidence in his doctor is reinforced. It is made clear to him that the person who is to treat him is a competent all-round *physician*, not a psychologist, philosopher, preacher, or other non-medical practitioner.

The next procedural step is the diagnosis. After a few days of intensive study, the physician determines what is the matter with the patient—physically, emotionally, and spiritually. In doing this he should forget about the diagnostic terms in the official nomenclature of mental disorders. They will do neither him nor the patient any good. He should consider only what appear to him to be this particular patient's disturbances and difficulties, and not get side-tracked on fitting them into nomenclature pigeon-holes. Having done this, he should explain his conclusions to the patient in lay terms, being careful to guard the sick person against more insight than can be helpful to him.

The physician next formulates a definite plan of treatment. He estimates how much the patient can be helped in the time available for treatment, and how the help can best be given. The competent psychiatrist does not fumble or drift. He knows *what* he is going to do, and *how* and *when* he is going to do it. The last element, *when*, should be stressed, for timing is as important in reeducation as it is in surgery. After the physician has made the treatment plan, he explains it to the patient, just as he explained his diagnostic

conclusions. Needless to say, he does this in terms that the patient can understand. Explaining matters to the patient is important, for in this way he becomes an active participant in treatment.

An essential part of the treatment plan is the establishment of a treatment milieu suitable for the particular patient. Consideration must be given to how the patient is going to live and what he is going to do while under treatment. Obviously an emotionally sick person will get little or no benefit from a few hours a week in a doctor's office if the conditions under which he is living are aggravating his illness, if his home life or his work—or perhaps both home and work—make it impossible for him to take the first step away from illness and toward health. Such a patient must quickly be taught how to change his reactions to his living conditions. Preferably, he should be temporarily placed in a special therapeutic environment.

One of these steps must be taken decisively and speedily, for it is well known that the *nervous patient under treatment will rapidly get worse if he does not at the beginning of treatment get better*. This is an elementary fact.

In regard to a special therapeutic environment, I do not consider a mental hospital or the psychiatric ward of a general hospital the proper milieu for psychoneurotics. I am opposed to placing such patients with psychotics or with other complaining neurotics under the care of uniformed nurses who baby them and enhance their dependency feelings. The ideal milieu is a psychiatric rehabilitation center with a relatively small number of ambulatory patients under active treatment who are regaining their physical and mental health. Patients in such a center should be asked to pledge that they will not complain or discuss their symptoms with anyone except the physician who is treating them.

To recapitulate the steps I have thus far discussed: The psychiatrist has obtained the patient's history, given him a physical examination, made a preliminary diagnosis, and prepared a treatment plan, part of which is the establishment of the appropriate treatment milieu. He has explained to the patient the nature of his illness and the proposed plan for treating it.

The psychiatrist and the patient are now ready for the next step—the didactic reeducation of the patient. The psychiatrist has the training and experience, and also the necessary data about the particular patient. The patient, who has already been fortified by the feeling that the doctor is competent and is sincerely interested in helping him, is generally willing to cooperate. If he is hesitant, the psychiatrist can usually persuade him by pointing out that he has nothing to lose in trying a treatment that has been used successfully with many other patients.

The objective of the didactic reeducation of the patient is for him to learn the principles of reeducation in such a way that they become a part of him, so that he can utilize them automatically, without conscious thought. They become as natural to him as breathing—to employ them becomes second nature. It also keeps the individual occupied for about three weeks with objective, intellectual pursuits and does not permit him to discuss his symptoms and himself with his doctor. This proves to him that such preoccupation has accentuated and continued his illness in the past. The process of accomplishing this follows a definite pattern, which has been proven by experience to give speedy and lasting results. The process proceeds on three fronts:

1. On the first front, reeducation is taught by the psychiatrist in daily individual tutoring sessions. During these sessions the patient and the therapist get to know each other. They exchange ideas. They do not talk about sickness or use psychiatric jargon. They think and talk in terms of health. These sessions, usually of one hour duration, break the patient's habit of thinking of himself as a sick person. He is flattered and stimulated by the value which the doctor obviously puts on his intellectual capacity, and he begins to feel that he can do something for himself in dealing with his problems and his illness.

In these tutoring sessions, the therapist takes the patient one step at a time through the entire program of reeducation.

2. The second front is reading of specially prepared printed material, divided into a series of brief pamphlets. After the

first few tutoring sessions, the patient is given these pamphlets, not all at once but one at a time. He is required to study them for two hours daily, and to learn their content academically, not to apply it to himself and his own problems. The patient is never given reeducational material which has not at first been fully explained to him. Never say "Take this book and read it; it will help you"—because it won't. It only becomes valuable when employed by the doctor and the patient.

For most people, the printed word carries more authority than the spoken word. Hence what the patient reads in his study of the reeducational pamphlets fortifies what he has been told in his face-to-face sessions with the psychiatrist, gives it authority, and establishes it firmly in his mind. In addition to this function, the pamphlets have two other purposes. One is to enlist the patient's intellectual powers, to train him to *think* in impersonal terms instead of only feeling in an egotistical, emotional way. The second purpose is to convey to the patient, through the medium of the impersonal printed word, some ideas that it might not be wise to talk with him about in the initial stages of treatment.

There is, of course, no hard and fast rule about the content of the pamphlets. In choosing the specific topics in the general area of reeducation, the basic functions of the printed material should be kept firmly in mind. These are: education, intellectual stimulation, emotional support, strong suggestion, and giving the patient something in which he can believe and which he can see is effective.

The reeducational pamphlets used in the psychiatric treatment center where I practice cover the following topics, each one taken up in a separate pamphlet:

1. The usual emotional disorders;
2. The nature and techniques of adaptation;
3. Man's adaptive mechanism;
4. General discussion of psychosomatic symptoms and the psychoneuroses;
5. The most usual "nervous reactions";
6. General techniques for more efficient adjustment;
7. The dynamic philosophy of acceptance.

The third front on which the reeducation process proceeds is for the patient to attend a series of group seminars while participating in daily psychotherapeutic sessions with the therapist. In these group seminars the subjects covered in the pamphlets are discussed and the patients are expected to participate. The material is presented impersonally. This is an important point. Only the doctor and the patient, in their one-to-one sessions, talk about the patient's personal problems. In the discussion sessions, the patient gains a great deal from being part of a group. He gets the feeling, "all of us are in the same boat—my situation is not unique or very serious—I am one of many people who are in some way temporarily emotionally handicapped." Thus the patient gets some perspective on his difficulties. As he comes to realize that his life situation and difficulties are no more severe than those of the average person, he begins to feel that he is actually better off than a lot of other people in that he is learning something they do not know, obtaining information they do not have.

The process I have thus far described—namely, the daily tutoring sessions with the psychiatrist, the study of printed material, and the group meetings—continue concurrently for about three weeks. The remaining period of the patient's stay at the center is devoted to intensive discussion between the therapist and the patient of the patient's unsolved difficulties, and the inculcation of practical techniques for dealing with them. As a method of teaching, patient and doctor reverse roles, and the patient tries to teach the doctor. He also writes out a full account of what he has learned, supplementing it with his own ideas.

By now, the patient begins to feel eager to return home to family and work. This is a natural reaction to a growing feeling of security and capacity for handling problems. It is, in a sense, a measure of how successful the treatment has been. Then, too, the patient's family has been kept in close touch with him throughout the course of treatment, and the psychiatrist has kept in close touch with the family, in order to prepare the way for the patient's return home.

Care should be taken not to isolate the

patient from family and friends. To do so makes for difficulties in adjustment to normal life. Frequent visits are encouraged. Short trial visits at home toward the end of his residential stay are preferable to keeping the patient too long in the treatment milieu for fear that he will not do well at home. The treatment milieu must not become a refuge.

When the patient is sent home after a few short trial visits, he takes with him a carefully planned written schedule to serve as a guide in planning his life—his work, play, exercise, and rest. Please take note of the first item in this line-up—*work*. It is important that the patient takes up his normal life, his work as well as his other activities. Only by doing this can he face reality and put into practice the principles of reeducation which he has learned.

Systematic follow-up is an integral part of reeducation therapy. This follow-up is essentially after-care, or, to put it another way, it is supervision and guidance while the basic principles and techniques that have been learned are put into practice. During the first six months after intensive treatment, the therapist should keep in touch with the patient by visits, telephone talks, and letters. The tie between doctor and patient is not abruptly broken at the end of this specific follow-up period. It is maintained just as a friendship is maintained. Like any other friendship relationship, it gives the patient the feeling that he can go it alone, but that—if need be—someone stands ready to give him a helping hand.

In addition to the intensive reeducational treatment of resident patients which I have described, the center where I practice reeducation has worked out another similar technique of handling out-patients. The center cares for twice as many of these as resident patients. We have found that for mild emotional difficulties, or difficulties of not too long duration, brief, out-patient treatment is very successful.

And now, some statistics on the effectiveness of reeducation as a psychotherapeutic procedure. A study of fifteen thousand clinical records of emotionally ill patients treated by reeducation shows the following results:

1. Patients with acute psychoneuroses: On the basis of ten years of follow-up, close to 100 per cent were cured.
2. Patients with chronic psychoneuroses: 50 per cent were relieved; 30 per cent were helped; approximately 20 per cent were neither better nor worse than before treatment.
3. Patients with prepsychotic personalities: No percentages can be given for this group, since the results were not definite, but it appeared that in many instances these patients were strengthened. They were either less likely to suffer subsequent psychotic breaks, or when such breaks occurred many of them were able to continue with their work in spite of what might be considered psychotic manifestations.

To sum up: The majority of emotionally ill patients are not as interested in what makes them sick as they are in getting well, once their motivation for recovery has been mobilized. To get well, and to avoid the recurrence of their illness, they must understand to a practicable extent the factors that caused their illness. They must develop maturity of character, understand the environment in which they live, and learn the techniques of adjustment. Reeducation teaches emotionally ill persons, particularly psychoneurotics, how to accomplish these ends. It helps them find new purposes and goals in life, and gives meaning to the concept that happiness cannot be selfishly sought, but is a by-product of a life of usefulness and service.

The psychiatrist practicing reeducation is a teacher, spiritual leader and friend, as well as a doctor of medicine. His work is grueling but the results richly repay the effort.

Speech Made at Blytheville to the Arkansas Practical Nurses Association

JAMES M. KOLB, M.D.*

It is indeed an honor to be here and have the privilege of speaking to you tonight.

First, I wish to congratulate you on the success of your growth. I have observed with interest your rise in numbers and influence. You are to be congratulated that so young an organization has had the national convention in its state. I wish to recognize your able executive secretary, and congratulate you on having so efficient a director. We of the medical profession recognize her ability and efficiency, and wish to state that she is a very definite help to us in our allied endeavors, namely, the Rural Health Council, the Joint Council on Aged, and other such programs.

I shall depart from my subject, "Expanding Frontiers", in some instances to bring you current thinking of the medical profession on subjects vital to the welfare of all of us.

More progress has been made in the first half of the 20th century than took place in the previous period of more than 6,000 years from the beginning of medicine in the earliest known civilizations. During this time, the physician has participated in victories over yellow fever, malaria, typhoid, cholera, dysenteries, appendicitis, pneumonia, and tuberculosis. There is hope now of virtually eliminating from the American scene all of the infectious diseases and others besides. While Arkansas is 3rd from the top in the nation's death rates for tuberculosis, this is due mostly to the death rate among our colored population. They will not take advantage of the help and sanitation offered them by our state agencies. Contrary to recent publications in our state newspapers, the colored race is not being neglected by our state and our physicians. The pro-rata bed space and appropriations for the treatment of tuberculosis in the colored race is higher than that of the white race in Arkansas. In round figures,

they have approximately $\frac{1}{3}$ as many beds as the white patients and nearly $\frac{1}{2}$ as much appropriation as the white, while their population will not exceed $\frac{1}{5}$ that of the white population. The fault lies in the economic level of the average colored population. Arkansas is making strides to correct this in providing employment, homes, and so forth.

But there is still need for physicians with understanding hearts and sober, investigating minds. Misbehavior of all sorts, mental illness, and suicide will decline as new drugs are developed and their use understood.

During my brief practice of medicine, having graduated in 1930, the use of the common drugs of salts, quinine, and calomel have mostly gone by the wayside. In their place are the antibiotics, sulfas, mycins, penicillin, and others. The electrocardiogram, the encephalogram, more use of x-ray, radium, ophthalmoscope, otoscope have developed. Isotopes, electronic and ultrasonic devices have developed. Heart surgery, blood vessel transplants and plastic replacements have developed.

While I was still in high school, I was office boy, janitor, maid, and "general flunky" to my father and his two partners. Many a time I have gone into a home, moved out all the furniture in a room, swept down the ceiling and walls, then gone over everything with a wet cloth, set up a portable operating table, sterilized the instruments and drapes in a large copper double-boiler-type sterilizer (which I still have), and acted as circulating nurse while operations of radical mastoidectomies, appendectomies, total hysterectomies, amputations and other major surgery were in progress. Then after the operation, I reversed the process. All instruments were re-sterilized before they left the house. The drapes, towels, and gowns were taken to the laundry before being returned to the office. In fact, I did my first appendectomy after returning home from medical school in the mountains north of Clarksville, in such a manner. The patient is alive and doing

*President of the Arkansas Medical Society at the annual banquet of the Arkansas Practical Nurses Association, at Blytheville, Arkansas.

fine. Incidentally, he has never gotten around to paying for that operation, either.

Just as there have been changes in the practice of medicine, our way of life has been changed. Electricity in nearly every home, gas, water, telephones, radio, television, cars, and air transportation are a few of the "wonders of the world" unheard of at the turn of the century.

There have been changes in our socioeconomic world, too. Taxes have increased. We have lost our "freedom" for which our forefathers left the "old" country and established this great nation. Centralization of powers in Washington has taken place, and unless stopped will be the downfall of our nation. Our enemies have stated for the past 50 years that they would not and could not conquer us from without by conquest, but would conquer us from within by dividing, setting race against race, and rotting from within.

As you know, the American people have on numerous occasions rejected socialized medicine, when congressional bills for it were defeated. *But*, the people who are advocating it haven't given up the fight. They have merely changed their tactics. They avoid the term "socialized medicine", which is plainly a governmental operated system for providing medical care, instead of private enterprise. Some people favor state medicine. Others oppose it. This group is in the majority so far. But no matter which side of the fence you're on, everyone seeks the same goal—better health and medical care for every person in this country. It is just a matter of how this goal is reached.

Physicians oppose state medicine for two reasons: *First*, they have faith in the ability of most Americans to make their own way in the world, with a little help from their neighbors when they hit bad luck. They believe a man ought to be his own master, making his own decisions about his way of life and the way he lives it. They believe it is this very spirit which

has made America a nation of self-reliant, self-respecting individuals. *Second*, they believe in improving the present system of medical care rather than scrapping it and starting from scratch with a plan which would result in poorer quality medicine for everyone.

Our good friend, Dr. Lowrey McDaniel, in his Chairman's Address to the General Practice Section of the AMA at Atlantic City on June 8, 1955, made quite a few predictions as to what would happen in the last half of the 20th century. Among those that have come to pass in these five short years are: improvement of salk vaccine to an improved living virus vaccine, ultrasonic and electronic devices, treatment of diabetes by tablets, and the beginning of space medicine.

Before January 1, 2000, I predict that cancer will be conquered. I have maintained for the past 25 years that cancer is caused by viruses, and now that has been proved in experimental animals. Biochemistry is due for an advance. By that date most diseases will be treated by replacement therapy, following a complete extensive chemical analysis of the blood and body serum. Transplantation of whole organs, replacement of blood vessels with plastic or such substances, will be a common operation. Mental disease will be on the wane. The plastic repair of bones by a plastic glue will be out of the experimental place where it is now. Hospital designs are due for modernization, too, where care may be given with less effort and at a cheaper cost than today.

Even with all these and other advances not yet dreamed of, it will still take the care given by the nurses and their aides. There is nothing that replaces the so-called "TLC" when one is in a sick bed and with his stamina and determination at a low ebb. This is where you come in—and no one nor no machine will ever be able to take your place.

◆ *What's* NEW ◆

What's New in Eye Surgery?

JOHN G. WATKINS, M.D.

There is much that is new in the field of eye surgery. A comprehensive review covering the entire field is virtually impossible. It is felt the following items would be of interest to the general physician.

Some rather inaccessible areas of the eye can be treated with a light beam instead of requiring surgery. Light coagulation of lesions in the retina and choroid of the posterior of the eye is a recent development. Gerd Meyer-Schwickerath, M.D., a German Ophthalmologist, is given credit for this procedure. A measured amount of light is passed through the optical media of the eye and carefully focused on the area of the retina or choroid to be coagulated. This area is controlled as to size and intensity. This treatment is indicated in many conditions, including Macula holes and degenerations, cysts, angiomatosis retinal, malignant melanoma of the choroid retinoblastoma and others. The high cost of the equipment limits this procedure to the larger medical centers which are able to afford the expense.

The use of Alpha-Chymatrypsin in cataract surgery is another recent development. The chemical disintegrating and

fragmenting of the fibers of the zonule during cataract surgery, Enzymatic Zonulolysis, has created a good deal of discussion. A majority of authors favor its use; there are a number of dissents, however. In the condition where it is needed the most, older children, it is unfortunately contraindicated. It is used in young adults over twenty-one years old with good results.

A new needle holder has been designed by Constroviejo. It has a long handle which is, in effect, a spring. It can be released by a gentle squeeze when held like a pencil, and is free of projections which entangle sutures.

Sterilization of instruments by placing them in hot air 325° F. for timed intervals is a practical method now. The instruments are ready to use as soon as they are removed from the sterilizer; they are free of irritating solutions. Rusting of instruments is nil and the heat does not damage the instruments, even the cutting edge. There are various hot air sterilizers on the market ranging in size from very small portable models to large cabinet type models.

A TEACHING SEMINAR
FROM THE
UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE

The Diagnosis and Management of Hypoglycemia During Infancy and Childhood

D. A. FISHER, M.D.*

Hypoglycemia is a particularly difficult problem in children because of its frequency during the critical stages of brain growth and development and the tendency for irreversible brain damage to occur with repeated hypoglycemic episodes. It has been estimated that hypoglycemic states occur with a frequency equal to that of diabetes mellitus, but McQuarrie et al feel that they occur far more frequently than diabetes mellitus in children under school age (1, 2). The undue susceptibility of the immature brain to permanent damage secondary to hypoglycemia, as well as a variety of other metabolic disorders, makes it imperative that diagnosis and treatment be accomplished relatively promptly in infants and young children.

Brain tissue is unique among body tissues in that it is almost exclusively dependent upon oxidation of blood glucose for its energy needs (3, 4). Thus optimal brain metabolism requires maintenance of an adequate blood sugar level. This responsibility falls predominantly upon the liver. The liver acts as a glucostatic organ, buffering changes in blood sugar, by virtue of the free permeability of the hepatic cell to glucose and the presence of glucose 6 phosphatase for the conversion of glucose 6 phosphate (G6P) to free glucose (5); changes in blood glucose may thus be buffered acutely by regulating the inter-conversion of glucose and liver glycogen. Peripheral tissues function predominantly as carbohydrate consumers but also act as storage reservoirs of carbohydrate precursors (fat and protein) which may be mobilized in situations of inadequate carbohydrate intake or other clinical circumstances where peripheral glucose supply or

metabolism is inadequate and liver glycogen stores have depleted (6-9). See Fig. I.

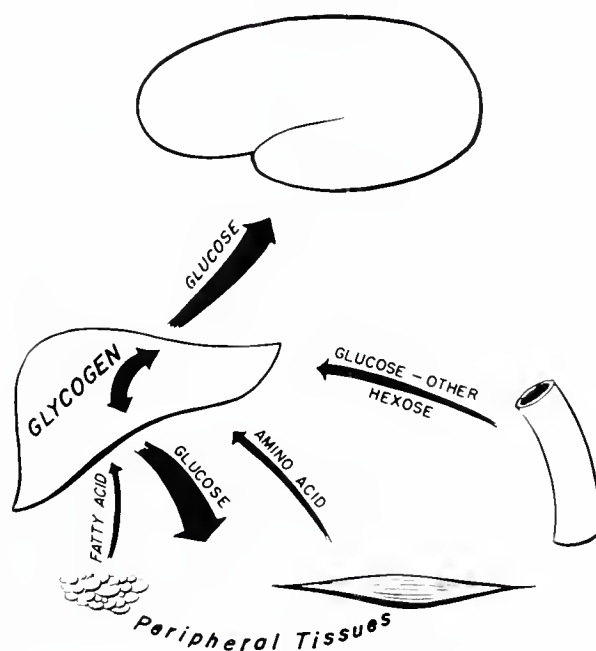


Figure I
General plan for blood sugar homeostasis.

In the overall "system" of intermediary metabolism there appears to be a compartmentalization or individualization of function among the several body tissues as regards the predominance of one or another pathway of metabolism. In the general pattern of cellular metabolism glucose is phosphorylated, under the influence of glucokinase, to G6P and is thence either polymerized to glycogen or metabolized by way of the Emden Meyerhof and Pentose Phosphate pathways to pyruvate. Pyruvate, in turn, is predominantly oxidized directly in the Krebs tricarboxylic acid cycle or converted to fatty acid for storage as body fat. Some conversion to amino acid may occur depending on the anabolic steroid influence and, in situations where pyruvate levels surpass the capacity of

*Department of Pediatrics, University of Arkansas Medical School, Little Rock, Arkansas.

other pathways, lactate may be formed (the latter is of greatest significance in muscle tissue) (5). These events are summarized in Fig. IIa.

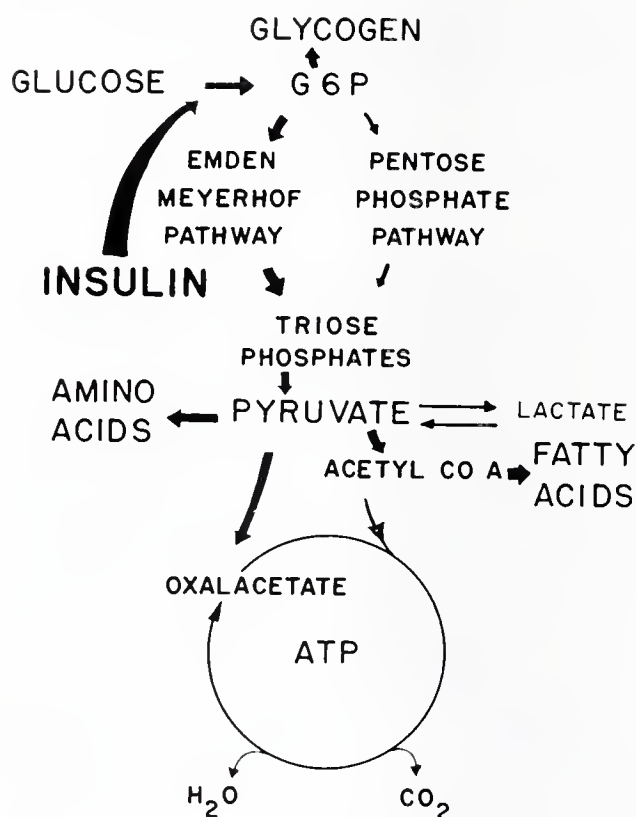
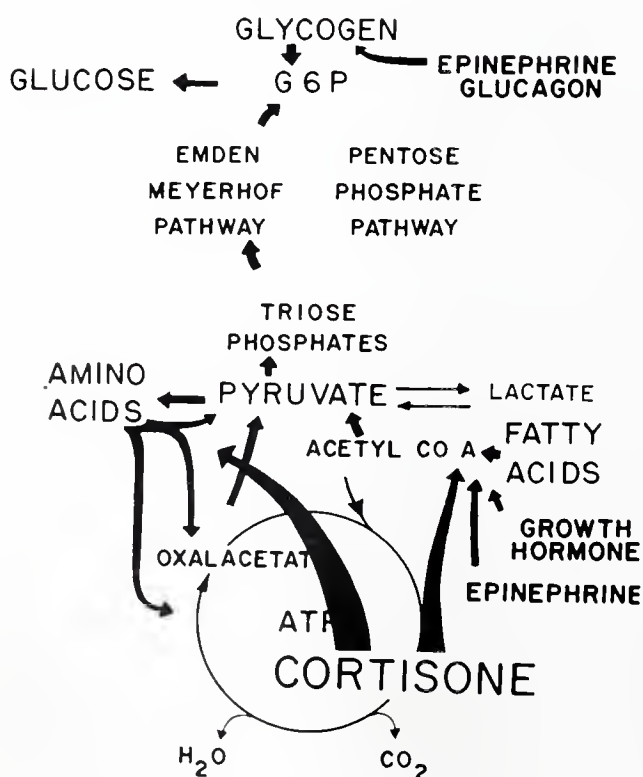


Figure II

General plan of intermediary metabolism.

a. insulin effect

b. anti insulin effect



As noted in Fig. IIa this sequence of utilization and storage of glucose is largely insulin dependent. The mechanism of *insulin* action is not entirely worked out (5, 7, 10). The predominant effects appear to be a stimulation of the utilization and storage of carbohydrate by the liver, perhaps by a stimulation of hepatic glucokinase (the enzyme responsible for conversion of glucose to G6P), and an increased permeability of peripheral cells to glucose (5, 7, 10, 11). The net effect is a decrease in blood sugar with an increased hepatic glycogen deposition, increased peripheral glucose utilization and muscle glycogen and stimulation of lipogenesis in adipose tissue. Whether insulin has specific effects on glycogenesis and Krebs cycle activity is undecided (6, 7, 10).

In situations of inadequate carbohydrate provision or insulin excess with hypoglycemia, reversal of many of these pathways of glucose utilization is effected, largely under hormonal influences, to counteract the actual or relative carbohydrate deficit.

Epinephrine and *glucagon* by activating liver phosphorylase stimulate the breakdown of hepatic glycogen to G6P and thus glucose (5, 12). *Glucagon* may have only an hepatic effect whereas *epinephrine* also stimulates mobilization of muscle glycogen and is an important stimulant of peripheral fatty acid mobilization (7, 8, 12-14). *Glucagon* may also have an effect on the mobilization of fatty acid (8).

Adrenal glucocorticoids are predominantly gluconeogenic, mobilizing body protein stores and accelerating hepatic carbohydrate formation from amino acid precursors (7). In addition *cortisone* plays an important role in the mobilization of body fat stores either directly or, more likely, by exerting a permissive action such that the mobilization of fatty acid by *epinephrine* and *growth hormone* is greatly enhanced in the presence of adrenal glucocorticoids (7, 8, 13, 14). Whether these hormones exert an additional direct effect on intermediary metabolic events is undecided (7).

Growth hormone is predominantly anabolic, stimulating protein synthesis and/or decreasing protein degradation, but also appears to mobilize body fat stores, par-

ticularly under the combined permissive influence of adrenal glucocorticoids (7, 8, 13, 14).

Thyroid hormones function in the role of metabolic stimulants, presumably by uncoupling oxidative phosphorylation and increasing energy expenditure and energy needs. An associated tendency to increased gluconeogenesis from protein and mobilization of fatty acid occurs, probably secondary to increased energy needs rather than direct influence of thyroid hormones (8, 15). Mobilization of fatty acids by epinephrine may also require thyroid hormones (15). The occasional hypoglycemia in thyroid deficiency probably results, however, from a secondary adrenal insufficiency as well as the general impairment in glucose absorption and basal metabolism (15).

Anabolic steroids (estrogen and androgen) effect an increased protein synthesis and/or decreased degradation. There is an effect, particularly of estrogens, on fat metabolism and perhaps adrenal function, but these hormones are relatively unimportant in the etiology and therapy of hypoglycemia (17). Thus the result of an actual or relative deficiency of available carbohydrate is an initial increased production of epinephrine and glucagon and an increased adrenal glucocorticoid and perhaps growth hormone secretion such that a net anti-insulin or hyperglycemic effect occurs. See Fig. IIb.

The details of these events of intermediary metabolism are tremendously complex involving as they do many pathways and reactions, many enzyme systems and many hormonal regulatory factors. In general, however, these events place the liver in the role of maintaining blood sugar by virtue of the predominance of the glycogen stores and the presence of the enzyme system (lacking peripherally) for conversion of G6P to glucose. Muscle tissue is oriented to the production of energy by way of the Krebs cycle as well as the insulin insensitive anaerobic glycolytic system. In addition muscle tissue serves as a large reservoir of protein for gluconeogenesis. Adipose tissue functions predominantly as a storehouse of excess carbohydrate as body fat. These tissue functions are influenced on the one hand by insulin, which increases utilization and

storage of carbohydrate, and, on the other hand, by several hormones with an "anti-insulin" effect which affect the mobilization of stored carbohydrate (glycogen and body fat) and body proteins for maintenance of body energy metabolism.

CAUSES OF HYPOGLYCEMIA

Hypoglycemia may, then, result from inadequate carbohydrate intake, inadequate hepatic function and effective glycogen stores, an increased insulin effect or a decreased anti-insulin effect. The possible causes are more specifically listed in Table I. Idiopathic hypoglycemia as the term is used clinically will often necessarily include the cases with pancreatic islet cell hyperplasia and in many instances the functional hypoglycemia patients (16, 18, 20). Perhaps 10-15% of idiopathic hypoglycemia cases may be observed to manifest pancreatic islet cell hyperplasia (20). McQuarrie has observed an absence of alpha cells in the pancreatic islet of 2 patients (21). The etiology of the occasional hypoglycemia in the infants of diabetic or prediabetic mothers is incompletely defined. There is convincing evidence, however, that it is the result of maternal hyperglycemia and secondary fetal hyperinsulinism (22, 23). Pancreatic neoplasia in children is extremely rare as a cause of hypoglycemia in contradistinction to adults. Howard in 1950 reviewed 398 recorded cases of pancreatic neoplasia producing hypoglycemia (24). Only nine of these were under 15 years. The etiologic factors in 40 cases of spontaneous hypoglycemia at the University of Minnesota over a 12-year period (1942-1954) is summarized in Table II (2); as noted, the majority of spontaneous hypoglycemia patients are likely to fall in the heterogeneous group labeled idiopathic hypoglycemia.

SYMPTOMS OF HYPOGLYCEMIA

Symptoms of hypoglycemia, because of the singular role of glucose in brain metabolism, will be manifest predominantly by CNS dysfunction. Observation of the symptoms and signs with progressive hypoglycemia during insulin shock therapy in schizophrenic patients has shown that the cerebrum is most sensitive to glucose deficiency with progressive involvement of "deeper" more central and caudal brain

areas as hypoglycemia progresses (25, 26). The usual manifestations will be cortical and will include inattention, clouded consciousness, sweating, salivation and tremors. Convulsions may occur, particularly in infants and younger children. Diencephalic autonomic dysfunction may be manifest as sympathetic hyperactivity, motor restlessness and automatic movements. With more severe and prolonged hypoglycemia mesencephalic symptoms including tonic and torsion spasms and pathological reflexes may appear. The pupils become dilated and unresponsive to light and diplopia may be observed. In the late Premyelencephalic and Myelencephalic phases tonic extensor rigidity, coma, hypotonia and depressed or absent reflexes are evident. If the depressed cortical metabolism is prolonged, particularly in infants and children, irreversible damage may occur.

Recurrence of the above symptoms two or three hours postprandially or progressive symptoms with fasting should arouse suspicion of hypoglycemia. This suspicion is confirmed by finding a true blood sugar of less than 40 mg. % at the time of the attack or during fasting with relief or symptoms following glucose administration.

DIFFERENTIAL DIAGNOSIS

Differential diagnosis includes first of all a good history—particularly regarding the time of initial onset of the attacks—the frequency and relationship of attacks to feeding, possible emotional or stressful stimuli, possible familial incidence and the presence of symptoms which might suggest thyroid, adrenal or pituitary deficiency, liver disease or a malabsorptive phenomenon. Physical examination may reveal cataracts and hepatomegaly in a galactosemic infant or hepatomegaly in an infant with one of the glycogen storage diseases. Signs of thyroid, adrenal or pituitary insufficiency may be manifest. Evidence of brain damage in those children having had severe recurrent hypoglycemic episodes may be present. Table III summarizes the distinctive differential features. It is frequently impossible in children to differentiate the functional and organic hyperinsulin syndromes and observation of the effect of therapy is usually necessary.

Investigation of the patient's blood sugar responses to test doses of glucose, insulin, epinephrine or glucagon, and occasionally L-Leucine may be of differential diagnostic aid.

Figures III-V show typical responses in the several syndromes to glucose, insulin and glucagon or epinephrine. These typi-

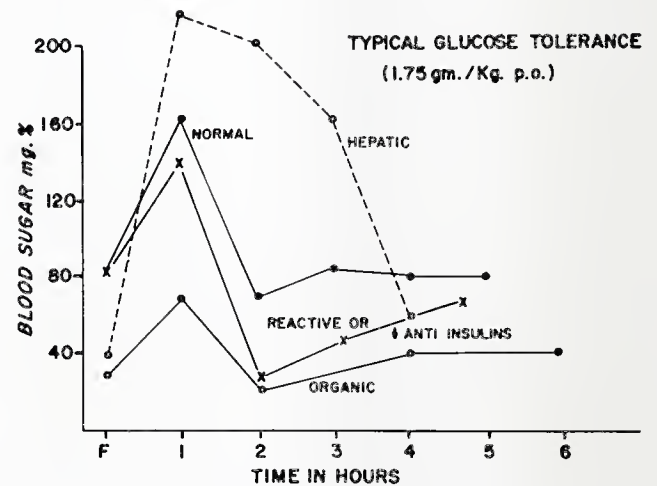


Figure III

cal responses are not invariable, however. For their proper interpretation it is important to control the dietary preparation of the patient for several days prior to testing in order to insure reasonable homeostasis and glycogen reserves (27).

Glucose Tolerance Test (Fig. III) The glucose tolerance test will show a diabetic response in the presence of hepatic disease and inability to store glycogen. A normal initial response with a hypoglycemic two or three hour level indicates hyper-reactivity to the elevated blood sugar and may result from over-production of insulin (functional or less frequently organic) or a lack of compensation in the form of an anti-insulin effect (adrenal or pituitary insufficiency). The patients with an organic hyperinsulinism are more likely to show a minimal response to the average glucose load.

Glucagon or Epinephrine Tolerance Test (Fig. IV) An inadequate glucagon or epinephrine response indicates either inability to store glycogen (cirrhosis, Hepatitis) or inability to mobilize liver glycogen (glycogen storage diseases). The majority of patients with glycogen storage diseases are of type I (von Gierki's disease), with deficient glucose 6 phosphatase, and cannot convert G6P to glucose (28). Thus no hyperglycemic response occurs. The rarer glycogen storage dis-

eases with branching enzyme deficiencies and abnormal glycogens may manifest a partial glucagon response (28). In this

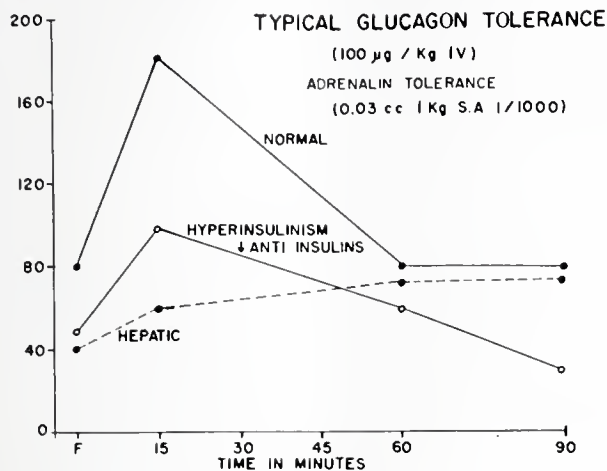


Figure IV

instance a repeat test 2-3 hours later will often show an absent blood sugar response indicating only a small reservoir of "available" glycogen.

In congenital galactosemia the inability to convert galactase I phosphate to glucose I phosphate blocks the utilization or storage of this sugar by way of normal pathways (28). With predominantly milk feeding the carbohydrate is largely galactose which accumulates in blood to the exclusion of glucose and produces hypoglycemia in the presence of normal total blood reducing sugar. The blood glucose, however, is low. (Both Folin and Tungstic acid filtrates and Somogyi zinc filtrates contain total reducing sugar. Galactose can be eliminated from blood sugar determination, however, by using a specific glucose oxidase method.) The renal threshold for galactose is low and galactose spills in the urine producing a positive Benedict's test or clintest® (total reducing sugar) but a negative response to clintistix® (specific glucose oxidase). Glucose tolerance is normal but a galactose tolerance test shows a typical diabetic curve when total blood reducing substance is measured (Folin Wu or Somogyi methods). Galactose and galactase 1 phosphate accumulate in tissues and presumably are responsible for the cirrhosis in these patients. The glucagon or epinephrine tolerance test in these patients usually shows an inadequate or hepatic type curve because of the chronic hypoglycemia and depleted glycogen reserves and because of the cirrhotic changes. A partial response

is not uncommon in hypoglycemic patients after prolonged hypoglycemia and depletion of glycogen stores, but the response usually becomes normal with adequate dietary preparation.

Insulin Tolerance Test (Fig. V) The insulin tolerance in the majority of hypoglycemic children is normal. Occasionally with organic hyperinsulinism an increased tolerance to the test dose of insulin may be seen (29). A decreased insulin toler-

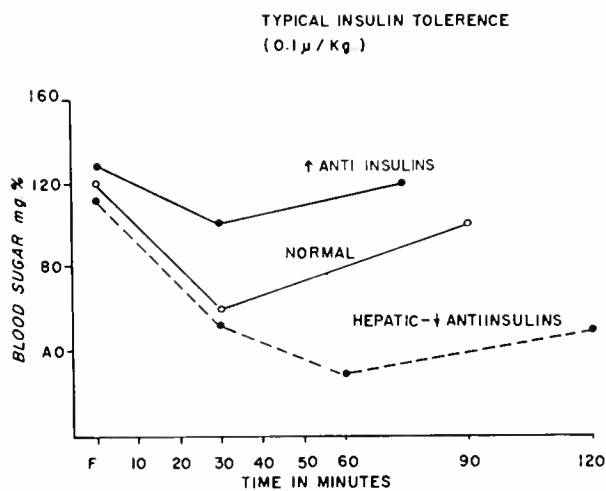


Figure V

ance with prolonged hypoglycemia may result with deficiency of anti-insulins (pituitary or adrenal insufficiency) or in hepatic disease where there are deficient glycogen reserves.

Most of the problems of differential diagnosis arise in the group referred to clinically as idiopathic hypoglycemia. This group may include patients with undetected small islet cell adenomas, islet cell hyperplasia or alpha cell deficiency as well as patients with functional hyperinsulinism. The often familial and truly idiopathic cases probably represent a heterogeneous group of etiologic factors. Some of these patients have seemed to show a decreased adrenalin response to hypoglycemia (30). Others, who were first observed to do poorly on a high protein diet were found to manifest profound hypoglycemia upon administration of the amino acid L-Leucine (31-34). There is evidence that L-Leucine and perhaps L-isoleucine as well as their respective alpha keto acids in some way stimulate pancreatic islet cells directly to release insulin or perhaps potentiate the peripheral action of insulin (32, 34). Two of the normal family members in Grumbach's cases also were hyper-reactive to L-Leu-

cine, suggesting an inborn metabolic error (32). Several patients, however, with maple sugar urine disease (a block in metabolism of branched chain amino acids) and markedly elevated serum Leucine levels have manifest hypoglycemia as have patients with pancreatic islet cell adenomas (32). Thus whether this is a specific defect or a secondary phenomenon is as yet undecided.

With a history of early postprandial hypoglycemia in an infant or young child after a high protein meal an *L-Leucine tolerance test* (150mg/Kg PO) may show a marked drop in blood sugar (an insulin release) within 30 minutes (32). It is important to remember, however, that this finding does not rule out an islet cell neoplasm.

All of the available diagnostic aids may not allow a differential diagnosis, particularly in the non familial, non Leucine sensitive patients in whom pancreatic neoplasia cannot be ruled out. Some of these children will have a normal response to the test situations except for a low fasting blood sugar. Not infrequently the only manifestation will be a hyperactive or reactive glucose tolerance curve. In these patients observation and trial of medical management is in order.

THERAPY

Therapy of the hypoglycemic patient will depend upon the etiologic factors involved. Specific replacement is indicated for anti-insulin deficiencies (thyroid-cortisone). Therapy in congenital galactosemia requires restriction of galactose intake (predominantly milk and milk products). Nutramigen or other non galactose milk substitutes may be used. An increased protein intake and carbohydrate supplements between meals may be helpful.

In glycogen storage disease frequent small feedings of more slowly available glucose precursors is indicated. Increased protein (as much as 20-25% of calories) and polysaccharide sugar sources (as in the diabetic) may be helpful. Elimination of galactose is also desirable since for metabolism this sugar must first be converted to G6P in the liver.

The hypoglycemia of chronic hepatic disease will usually respond to frequent feedings of more complex polysaccharides,

as in the diabetic, and increased protein intake.

In the functional or hyperactive hypoglycemias similar dietary manipulation to avoid high postprandial blood sugar levels may be helpful. Attempts at avoidance of stress and infection, as well as prompt symptomatic approach to such situations, will also be of benefit. These patients usually improve as they get older.

The major therapeutic problems again arise in the group of idiopathic hypoglycemias. These comprise the largest group which will be encountered. The first problem is the always present possibility that a pancreatic islet cell neoplasm may exist. The statistical possibility if small, but in the single patient statistics are of little help. The major clue will be progressive symptoms in spite of therapy.

In the absence of Leucine sensitivity a high protein diet (15-25% of calories) and frequent feedings with more complex polysaccharides is of value. "Anti-insulin" hormone therapy is frequently helpful. The most practical chronic anti-insulin effect clinically is obtained with the adrenal glucocorticoids. These agents may affect a very significant increase in insulin tolerance and alleviation of symptoms. Repository adrenocorticotropin may be useful in an occasional patient. Epinephrine is of limited value in chronic therapy but may be helpful in the therapy of hypoglycemic episodes. Ephedrine has proven of value in the few patients with a deficient epinephrine response (30). In the Leucine sensitive patient carbohydrate supplements one to two hours postprandially may provide relief of symptomatology. However, with marked sensitivity some restriction of dietary Leucine and Isoleucine may be beneficial. Since these are essential amino acids, some dietary provision is necessary. The minimal requirement of Leucine for growth is 150 to 230 mg per Kg (37). Human milk contains only 40% as much Leucine as cow's milk on an isocaloric basis. Several of the prepared milk formulas approach human milk in L-Leucine content (33). These are listed in Table IV. Goats milk and soy bean milk formulas are also useful and contain about 220 mg L-Leucine per 100 ml of 20 cal/Oz formula. Plain gelatin contains only $\frac{1}{3}$ the L-Leucine of casein and $\frac{1}{2}$ that of

beef muscle protein and is a useful formula supplement in low Leucine diets. Ten gm. of plain dry gelatin provides 8.6 gm. of protein with only 274 mg. of L-Leucine. Thus the dietary approach is one of provision of a relatively low Leucine protein source with supplementation of vegetables, fruit, and cereals. The most suitable of the latter are listed in Table V.

As an example it is desired that a 1-year-old 10 Kg. child who manifests L-Leucine sensitive hypoglycemia be put on a low Leucine diet. The child requires 1,000 calories daily and 25 to 30 gm. of protein. A conservative and minimal 1.5 gm. L-Leucine requirement is desired. The following basic Formula might be provided.

Formula	Content in gms			
	Calories	Protein	Fat	L-Leucine
Similac, 24 ounces	480	13	25	1.3
Gelatin (plain)				
20 gm.	70	17		0.5
TOTAL	550	30	25	1.8

The remaining 450 calories may be provided from the listed items in Table V.

In older children substitution of a prepared formula for cow's milk and restriction of meat with supplementation of gelatin allows a minimal but adequate L-Leucine intake.

The majority of idiopathic hypoglycemia patients respond to medical management and will often spontaneously improve by five to six years of age. In the face of continued symptoms poorly responsive to medical therapy, given a 1-2 year period of adequate trial, a laparotomy for attempted identification of an islet cell adenoma or partial pancreatectomy is in order. Of the 58 cases of reported idiopathic hypoglycemia reviewed by Hawthorth and Coodin 25 underwent partial pancreatectomy (20). Of these, 15 cases were cured and 10 were not benefited by the operation. The pancreas was found to be normal in 17 (nine cures) and hypertrophy of the islet was noted in eight (six cures). Gross recommends resection of about 80% of the pancreas (38).

CASE EXAMPLES

Case I The following case is rather typical of idiopathic hypoglycemia and, in addition, manifests mild L-Leucine sensitivity. A three-year-old white female pre-

sented with a history of recurrent dizzy spells with falling which began at about 1½ years of age. These usually occurred after prolonged fasting, particularly at night or during the early morning. If a midnight feeding was not given she was awakened with difficulty, was unable to walk, her eyes became somewhat fixed and her mother felt she was only partially conscious. She often manifested crying with these episodes. There was no family history of defective carbohydrate metabolism.

Physical examination revealed her height and weight considerably below the third percentile for her age and about average for an 18-month-old child. The child walked with a wide ataxic gait but the neurological examination was otherwise unremarkable and there were no other positive physical findings.

Fasting blood sugar was 34 mg. %. An electroencephalogram showed diffuse dysrhythmia with high voltage polyspike discharges over both hemispheres. Skull films were normal. Psychological testing revealed a mental age of about two years. PBI was 5.0 mcg. %. Liver function tests were normal. Initial glucose and adrenalin tolerance tests are shown before treatment in Figs. VI and VII.

She was put on a 1200 calorie 70 gm. protein diet and was fed at five hourly intervals. After one week of this diet, glucose, glucogen and insulin tolerance tests were done. These responses are shown in Figs. VI and VII and are labeled "Hi protein." The fasting blood sugar levels and glucose tolerance are improved and her glucagon response is now normal implying a repletion of her glycogen stores. She was then given Nilevar® (an anabolic

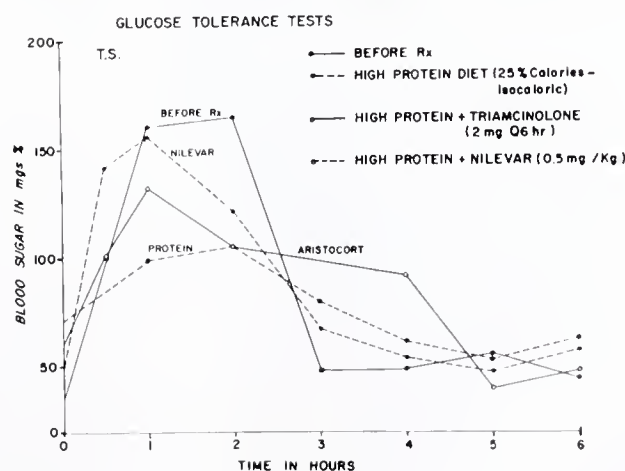
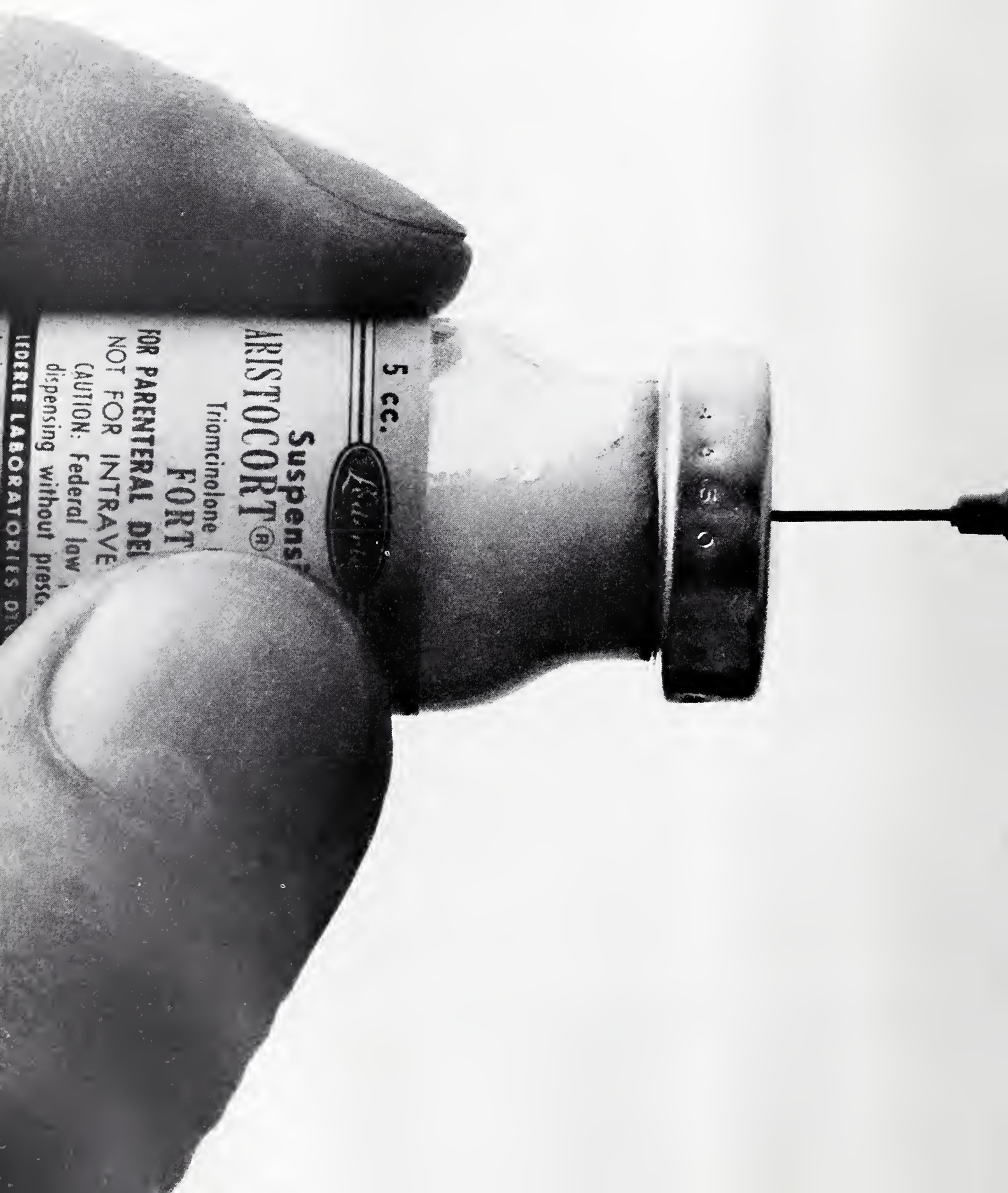


Figure VI

when your patient needs
a potent steroid...simplified control
of subacute or chronic disease...



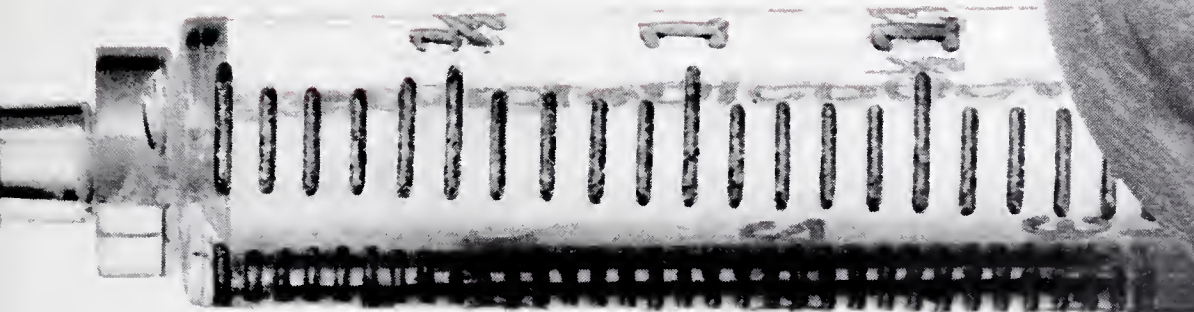
New Aristocort[®] Forte

TRIAMCINOLONE

Diacetate Parenteral Suspension Lederle

highly effective repository action with single,
or infrequent, I.M. injections

Single I.M. doses of ARISTOCORT FORTE 4 to 7 times the usual daily oral dose can control symptoms 4 to 7 days, or even longer — sometimes up to 4 weeks in responsive conditions. . . . Total amount of steroid required is often less than with oral forms. Thus, steroid side effects are minimized. Another advantage of ARISTOCORT FORTE: may be given through a small-gauge needle, causing the patient no discomfort . . . plus the special advantages of triamcinolone.



INDICATIONS: Asthma and other allergies, including allergic rhinitis, hay fever, drug reactions; dermatoses, including psoriasis, poison ivy, urticaria, atopic eczema, pruritus; rheumatoid arthritis and other musculoskeletal conditions.

ARISTOCORT FORTE Parenteral — a suspension of 40 mg./cc. of triamcinolone diacetate micronized in: polysorbate 80 USP . . . 0.20%; polyethylene glycol 4,000 USP . . . 3%; sodium chloride . . . 0.85%; benzyl alcohol . . . 0.90%; water for injection q.s. . . . 100%; hydrochloric acid to approx. pH 6.

Not For Intravenous Use

Request complete information on indications, dosage, precautions and contraindications from your Lederle representative, or write to Medical Advisory Department.



LEDERLE LABORATORIES

A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

steroid) for several days and the tests repeated. Tests were repeated a third time after several days of adrenal steroid (aristocort)[®] therapy. These tests are also shown in Figs. VI and VII. The Nilevar[®], as expected, tended to depress the fasting blood sugars obtained with the high pro-

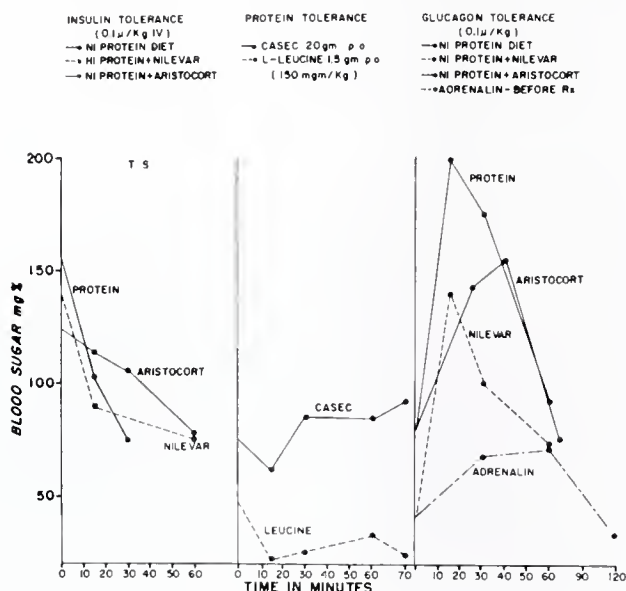


Figure VII

tein diet and did not improve glucose tolerance. Insulin tolerance was unaltered. Aristocort, however, improved the three and four hour glucose tolerance and increased the insulin tolerance. Liver glycogen stores remained adequate throughout.

This patient also showed a hypoglycemic response to 1.5 gms. of L-Leucine but not to 20 gm. of casec, which contains about two gm. of L-Leucine but is more slowly absorbed. Thus she manifests a mild L-Leucine sensitivity.

Because of these findings the patient was discharged on a 1200 calorie 25% protein diet of which 10% was normal protein and the remaining 15% gelatin. Aristocort two mg. every eight hours was added. She has done very well on this regimen.

Case II The second patient presents a rather typical history of severe L-Leucine sensitive idiopathic hypoglycemia. She was a nine-month-old white female who was referred with a known diagnosis of hypoglycemia and convulsions. Subsequent to a change from breast milk to evaporated milk at two months of age the child gained poorly and at four months of age had a major seizure. Fasting hypoglycemia was detected and ACTH therapy begun. The child improved until the onset of a urinary tract infection at seven

months after which time she was constantly lethargic, gained and ate poorly and had intermittent minor seizures.

The family history was unrevealing. Her height was in the 25th percentile and her weight in the third percentile for her age. She appeared cushinoid, but the physical examination was otherwise unremarkable. Fasting blood sugar was 30 mgs. %, PBI was 7.5 mcg. %. Electroencephalogram revealed diffuse dysrhythmia with high voltage spikes and paroxysmal slow waves lateralized to the left. Leucine sensitivity was suspected because of the history of doing poorly on cow's milk and responding poorly to adrenal cortical steroids. L-Leucine tolerance tests were done on two occasions; both tests produced convulsions—one at 30 and the other at 60 minutes. She was placed on a low L-Leucine diet and her insulin, adrenalin, and glucose tolerances measured after one week. These are shown in Fig. VIII. Her insulin and adrenalin tolerances were normal and a typical reactive glucose toler-

ALL TESTS FASTING AFTER 1 WK. LOW LEUCINE DIET
1.4 - 2.0gm LEUCINE/DAY 63-113 CAL./Kg./DAY

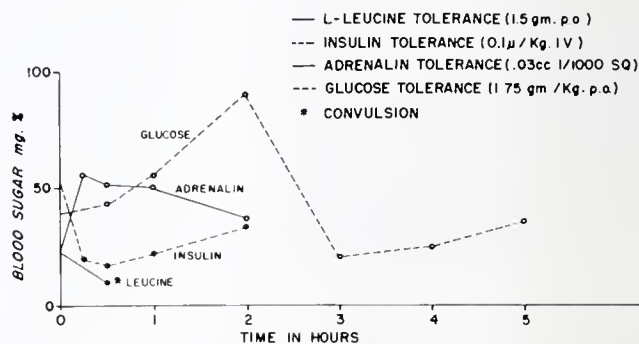


Figure VIII

ance test was noted. Fasting blood sugars were in the neighborhood of 50 mgs. % on the low Leucine diet. She was discharged on a low Leucine diet with supplemental adrenal steroids in small doses and has shown considerable improvement.

Table I
CAUSES OF HYPOGLYCEMIA

- I. Idiopathic Hypoglycemia
 - a) L-Leucine sensitivity
 - b) Adrenalin unresponsiveness
 - c) Alpha cell deficiency (glucagon deficiency)
- II. Infants of Diabetic Mothers
- III. Insulin Excess
 - a) Organic
 - 1) Pancreatic islet cell adenoma or carcinoma
 - 2) Pancreatic islet cell hyperplasia
 - 3) Insulin administration
- IV. Deficiency of Insulin Antagonists
 - a) Adrenal insufficiency

- b) Hypothyroidism
- c) Hypopituitarism
- V. Deficiency of Available Glucose
 - a) Hepatic disease
 - 1) Inborn errors—galactosemia—glucogen storage disease
 - 2) Cirrhosis
 - b) Increased carbohydrate loss
 - 1) Renal glucosuria (severe)
 - 2) Severe inanition
- VI. CNS Lesions
 - Brain stem or hypothalamic interference with autonomic blood sugar homeostasis.

Table II
RELATIVE ETIOLOGIC INCIDENCE
OF HYPOGLYCEMIA*

1. Idiopathic hypoglycemia	25
2. Adrenal insufficiency	6
3. Glycogen storage disease	3
4. Infants of diabetic mothers	2
5. Panhypopituitarism	1
6. Cretinism	1
7. Solitary pancreatic islet cell tumor	1
8. Congenital galactosemia	1
<hr/>	
TOTAL	40 cases

*University of Minnesota Hospital 1942-54²

Table III
DIFFERENTIAL CHARACTERISTICS
OF HYPOGLYCEMIA

- I. Idiopathic Hypoglycemia
 - a) May be familial history.
 - b) Symptoms usually manifest before age 5.
 - c) Symptoms usually appear during fasting or postprandial state (prandial or early postprandial symptoms suggest marked L-Leucine sensitivity).
 - d) Usually a good response to adrenal cortical steroids in the absence of L-Leucine sensitivity.
- II. Organic Hyperinsulinism
 - a) Periodic symptoms related to fasting state and progressive with fasting.
 - b) Symptoms progressive with time.
 - c) Poor response to therapy.
- III. Functional Hyperinsulinism
 - a) Periodic symptoms postprandially (2-3 hours).
 - b) Symptoms may occur at any time—reaction to emotional stress, infections, etc.
- IV. Deficiency of Insulin Antagonists
 - a) Other signs and symptoms of pituitary, adrenal or thyroid deficiency.
 - b) Symptoms of hypoglycemia characteristically progressive with fasting.
- V. Hepatic Disease
 - a) Signs and laboratory evidence of liver disease.

Table IV
L-LEUCINE CONTENT OF MILK
OR FORMULA*

mg/100 ml of 20 cal/Oz preparation	
Human Milk	161
Cow's Milk	356
Bremil	156
SMA	157
Enfamil	164

Similac	181
Mull-Soy	220
Sobee	225

*From Mabry et al.³³

Table V

FRUIT AND FRUIT JUICE LIST*	VEGETABLE LIST*
(All fruits may be eaten)	Yam's (not sweet potatoes)
Bananas	White potatoes
Avacados	Squash
Grapes or Grape Juice	Carrots
Prunes or Prune Juice	Beets
Pineapple or Pineapple Juice	Green Beans
Apples or Apple Juice	Asparagus
Pears or Pearade	Celery
Peaches or Peachade	Tomatoes
Apricots or Apriade	Turnips
Oranges or Orange Juice	(No spinach or green leafy vegetables)
Grapefruit or Grapefruit Juice	
Melons	

CEREAL LIST
(Cereals given with butter or margarine)
Farina (Cream of Wheat)
Cream of Rice
Puffed Rice
Rice Krispies

*Lists are presented in order of desirability as regards caloric content. Presented in order of increasing Leucine content. Other cereal products are undesirable.

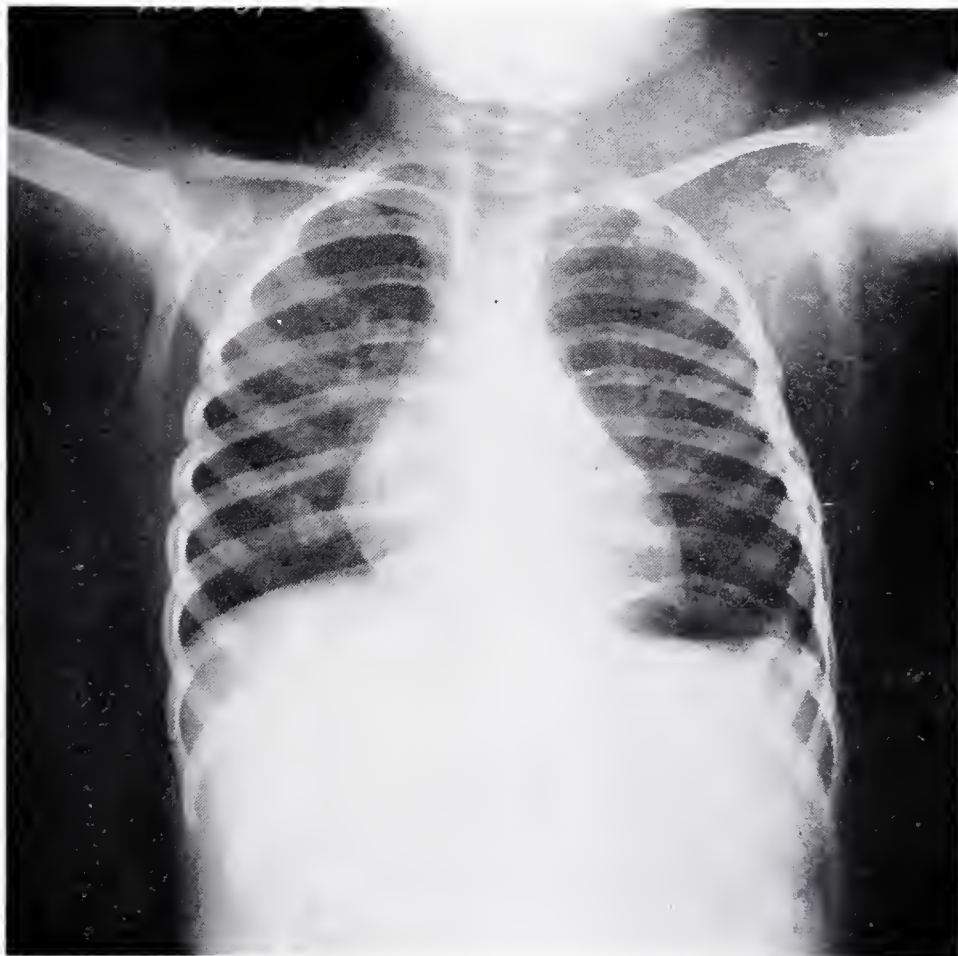
Bibliography

- 1. Harris, S., The diagnosis and treatment of hyperinsulinism, *Ann. Int. Med.*, 10:514-533, Oct. '36.
- 2. McQuarrie, I., Ulstrom, R. A. and Ziegler, M. R., Random notes concerning the etiological mechanism and treatment of spontaneous hypoglycemia, *Acta. Paediat.*, (Supp. 100) 43:481-494, '54.
- 3. Himwich, H. E., Brain metabolism and cerebral disorders, Baltimore, Williams & Wilkins, 1951, p23.
- 4. Himwich, H. E. and Nahum, L. H., Respiratory quotient of brain, *Am. J. Physiol.*, 90:389-390, Oct. '29.
- 5. Cahill, G. F., Jr., Ashmore, J., Renold, A. E. and Hastings, A. B., Blood glucose and the liver, *Am. J. Med.*, 26: 264-282, Feb. '59.
- 6. West, E. S. and Todd, W. T., Textbook of biochemistry, 2nd ed., New York, Macmillan, 1955, p850-1148.
- 7. Ashmore, J., Cahill, G. F., Jr., and Hastings, A. B., Effect of hormones on alternate pathways of glucose utilization in isolated tissues, *Recent Prog. Hormone Res.*, 16: 547-577, '60.
- 8. Wertheimer, E. and Shafrir, E., Influence of hormones on adipose tissue as a center of fat metabolism, *Recent Prog. Hormone Res.*, 16:467-495, '60.
- 9. Siperstein, M. D., Inter-relationships of glucose and lipid metabolism, *Am. J. Med.*, 26:685-702, May '59.
- 10. Stadie, W. C., Current concepts of the actions of insulin, *Physiol. Rev.*, 34:52-100, Jan. '54.

DIAGNOSIS AND MANAGEMENT OF HYPOGLYCEMIA DURING INFANCY AND CHILDHOOD

11. Kipnis, D. M., Helmreich, E. and Cori, C. F., Studies of tissue permeability. IV. The distribution of glucose between plasma and muscle, *J. Biol. Chem.*, 234:165-170, Jan. '59.
12. Sutherland, E. W., The effect of hyperglycemic factor and epinephrine on enzyme systems of liver and muscle, *Ann. New York Acad. Sc.*, 54:693-706, Dec. 28, '51.
13. Scow, R. O. and Chernick, S. S., Hormonal control of protein and fat metabolism in the pancreatectomized rat, *Recent Prog. Hormone Res.*, 16: 497-545, '60.
14. Reshef, L. and Shapiro, B., Effect of Epinephrine, cortisone and growth hormone on release of unesterified fatty acid concentration and on its response to glucose ingestion, *Metabolism*, 9:551-555, June '60.
15. Marks, B. H., Kiem, I. and Hills, A. G., Endocrine influences on fat and carbohydrate metabolism in man. I. Effect of hyperthyroidism on fasting serum nonesterified fatty acid concentration and on its response to glucose ingestion, *Metabolism*, 9:1133-1138, Dec. '60.
16. Conn, J. W. and Seltzer, H. S., Spontaneous hypoglycemia, *Am. J. Med.*, 19:460-478, Sept. '55.
17. McKerns, K. W. and Bell, P. H., The mechanism of action of estrogenic hormones on metabolism, *Recent Prog. Hormone Res.*, 16:97-119, '60.
18. McQuarrie, I., Idiopathic spontaneously occurring hypoglycemia in infants; Clinical significance of problem and treatment, *A.M.A. Am. J. Dis. Child.*, 87:399-428, April '54.
19. Kinsbourne, M. and Woolf, L. I., Idiopathic infantile hypoglycaemia, *Arch. Dis. Childhood*, 34:166-170, April '59.
20. Haworth, J. C. and Coodin, F. J., Idiopathic spontaneous hypoglycemia in children, *Pediatrics*, 25: 748-765, May '60.
21. McQuarrie, I., Bell, E. T., Zimmerman, B. and Wright, W. S., Deficiency of alpha cells of pancreas as possible etiological factor in familial hypoglycemia, *Fed. Proc.*, 9:337, March '50.
22. Osler, M. and Pedersen, J., The body composition of newborn infants of diabetic mothers, *Pediatrics*, 26:985-992, Dec. '60.
23. Driscoll, S. G., Benirschke, K. and Curtis, G. W., Neonatal deaths among infants of diabetic mothers; V. Postmortem findings in ninety-five infants, *A.M.A. Am. J. Dis. Child.*, 100:818-835, Dec. '60.
24. Howard, J. M., Moss, N. H. and Rhoads, J. E., Collective review: Hyperinsulinism and islet cell tumors of the pancreas with 398 recorded tumors, *Internat. Abstr. Surg.* 90:417-455, '50; in *Surg., Gynec. & Obst.*, May '50.
25. Himwich, H. E., Frostig, J. P., Fazekas, J. F. and Hadidian, Z., The mechanism of the symptoms of insulin hypoglycemia, *Am. J. Psychiat.*, 96:371-385, Sept. '39.
26. Frostig, J. P., Clinical observations in the insulin treatment of schizophrenia; preliminary report pt. I. The symptomatology and therapeutic factors of the insulin effect, *Am. J. Psychiat.*, 96:1167-1190, March '40.
27. Conn, J. W., Interpretation of the glucose tolerance test; The necessity for a standard preparatory diet, *Am. J. Med. Sc.*, 199:555-564, April '40.
28. Hsia, D. Y., Inborn errors of metabolism, *Chicago, Year Book*, 1959, p126-155.
29. Hartmann, A. F., Sr., Wohltmann, H. J., Holowach, J. and Caldwell, B. M., Studies in hypoglycemia, *J. Pediat.*, 56:211-233, Feb. '60.
30. Broberger, O., Jungner, I. and Zetterstrom, R., Studies in spontaneous hypoglycemia in childhood. Failure to increase the epinephrine secretion in insulin induced hypoglycemia, *J. Pediat.*, 55:713-719, Dec. '59.
31. Cochrane, W. A., Payne, W. W., Simpkins, M. J. and Woolf, L. I., Familial hypoglycemia precipitated by amino acids, *J. Clin. Invest.*, 35:411-422, April '56.
32. Grumbach, M. M. and Kaplan, S. L., Amino acid and alpha-keto acid-induced hyperinsulinism in the leucine-sensitive type of infantile and childhood hypoglycemia, *J. Pediat.*, 57:346-362, Sept. '60.
33. Mabry, C. C., DiGeorge, A. M. and Auerbach, V. H., Leucine-induced hypoglycemia. I. Clinical observations and diagnostic considerations, *J. Pediat.*, 57:526-538, Oct. '60.
34. Mabry, C. C., DiGeorge, A. M. and Auerbach, V. H., Leucine-induced hypoglycemia. II. Studies concerning other amino acids and leucine metabolites, *J. Pediat.*, 57:539-547, Oct. '60.
35. Cochrane, W. Idiopathic Infantile Hypoglycemia and Leucine Sensitivity Metabolism 9:386, 1960.
36. Flanagan, G. C., Schwartz, T. B. and Ryan, W. G. Studies on Patients with Islet Cell Tumor, including the Phenomenon of Leucine induced Accentuation of Hypoglycemia. *J. Clinical Endocrinology* 21:401, April, 1961.
37. Holt, L. E., Amino acid requirements in infancy, *Ross Conference on Pediatric Research* 30th, p11-17, '59.
38. Cross, R. E., *The Surgery of Infancy and Childhood*, Philadelphia, Saunders, 1953.

What Is Your Diagnosis?



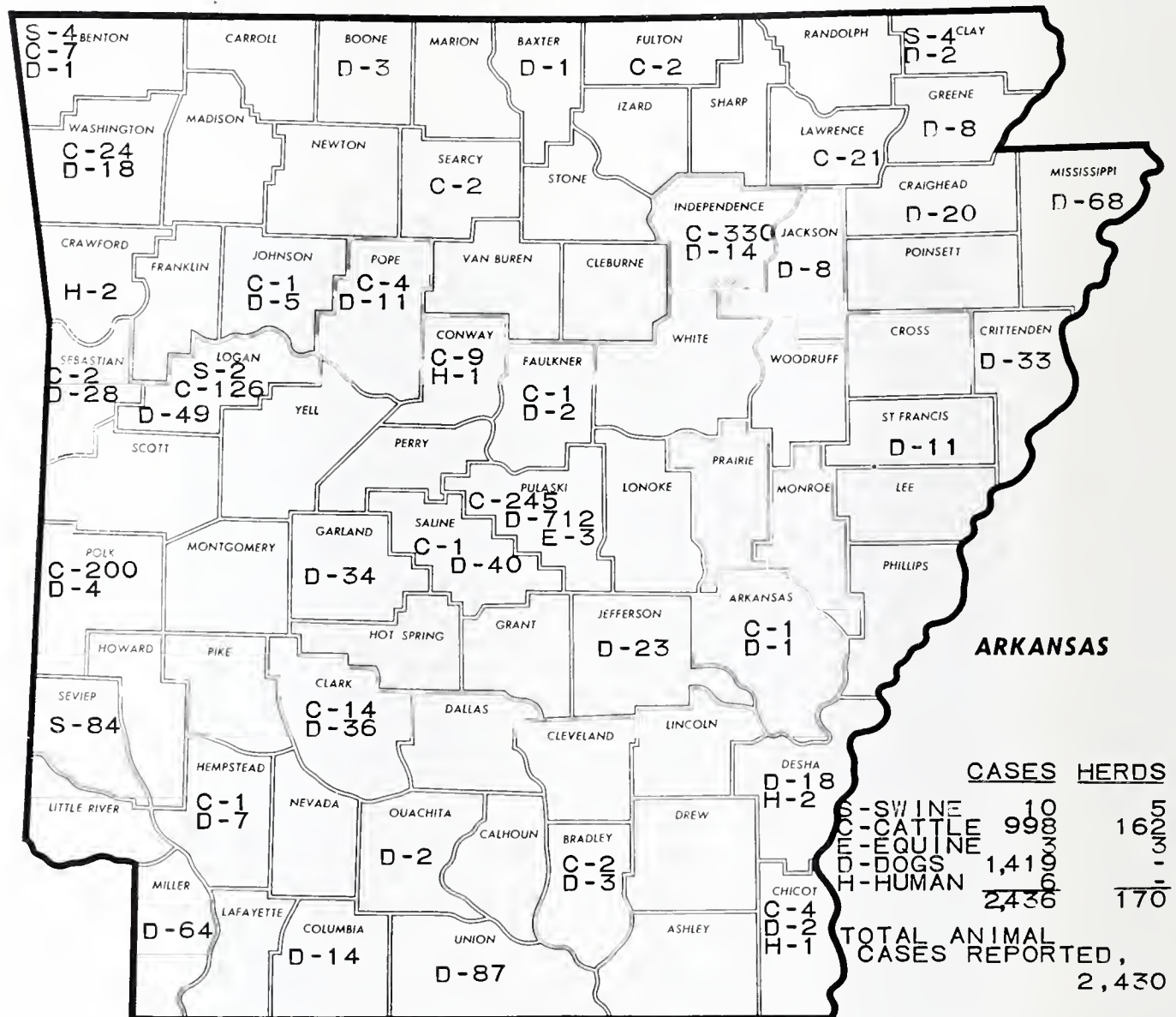
From Radiology Dept., University of Arkansas Medical Center.

FOR ANSWER SEE PAGE 174

Arkansas Public Health at a Glance

Leptospirosis in Arkansas

1960



STATE BOARD OF HEALTH

This disease represents a group of acute systemic infections found in lower animals and transmitted to man under natural conditions. Leptospirosis causes losses in our national livestock economy in an amount estimated to be \$225 million a year.

The disease (Leptospirosis) is caused by the various species of leptospira. A few of the many serotypes are: leptospira icterohaemorrhagiae; L. canicola; L. autumnalis, and L. pomona, all of which have been recovered from man. At least 60 serotypes of the disease are recognized.

The clinical symptoms in man include elevation of temperature, headache, chills,

sever malaise, vomiting, muscular aches, meningeal irritation and conjunctivitis; infrequently, jaundice, renal insufficiency with hemolytic anemia. The illness lasts from one to three weeks; sometimes relapses do occur. The disease is not usually fatal; however, it can be so in severe cases. Leptospirosis is sometimes referred to as Swineherd's Disease, Mud Fever, Canicola Fever, Weil's Disease, Hemorrhagic Jaundice, Fort Bragg Fever, and Rice Field Fever.

The clinical symptoms of leptospirosis in animals may present the disease in one of three ways: mild, moderate, and severe. The common symptoms are refusal

FEATURES

to eat, loss of weight, followed by abortion in pregnant sows and cows. In dogs the disease manifests its presence by fever, anorexia, anemia, icterus, uremia, and occasionally, hemorrhage. Dogs may also present an inapparent infection.

Leptospirosis is usually transmitted through infected urine. Animals that shed the organisms in the urine are called "carriers". The most likely method of transmission for animals occurs when the organisms are excreted in water and moist soil. Infection in man usually occurs when contact is made with urine or tissue of infected animals.

Leptospirosis can best be controlled by using the following measures:

1. Isolate sick animals from the herd.
2. Diagnosis should be made by a qualified veterinarian.
3. Inspect herd daily for sick animals.
4. Follow veterinarian's instructions for treatment.
5. Prevent contamination by urine.
6. Maintain cattle, swine, and other domestic animals under separate conditions.
7. Blood test all animals on the farm.
8. Have veterinarian vaccinate all susceptible animals in the herd and if infection reappears, vaccinate every six months until no new cases appear.
9. Initiate rodent control where indicated.
10. Retain for breeding animals which aborted and recovered because they have resistance to the disease.
11. Blood test bulls and boars.
12. Blood test all replacement stock.
13. Take proper precautions not to expose humans to the infections.
14. All farm ponds, and swampy areas should be fenced to prevent the access of animals to such areas.
15. If individuals are exposed, consult physician for advice and treatment.

In applying the above factors which pertain to the spread of leptospirosis in the human population attention should be directed toward the popular summer sport of swimming. People should not swim in farm ponds, old-fashioned swimming holes, small lakes and streams to which domestic and wild animals have repeated access. Since leptospirosis may gain entrance into the body through the conjunctiva or mucous membranes of the nasal passages, it is very necessary that all public and private swimming pools be maintained free from contamination. Such pools should be well fenced to prevent the entrance of all animals in the water or pool area. This is especially true of dogs that might be spreaders of leptospirosis. The practice of going barefooted in the summer months and swimming in unapproved sources may contribute to leptospirosis infections in certain human populations.

RESOLUTION

Whereas, God in his infinite wisdom has seen fit to take from this life Dr. Albert R. Sparks in the prime of a fruitful life, and

Whereas, Dr. Sparks was a staunch and participating member of his church, a kind and devoted husband and father, and Whereas, Dr. Sparks served the people of this community in the practice of medicine and other endeavors with great skill, and

Whereas, Dr. Sparks was highly respected by his office staff and by those of us closely associated with him in the practice of medicine, and

Whereas, Dr. Spark's many devoted friends and patients will long remember the excellent quality and character of his friendship and services, and

Whereas, many people of many types and conditions will miss him and regret his passing, therefore

Be it resolved, by the Pulaski County Medical Society, of which Dr. Sparks was a member, that we are sorrowed by his departure, ...

That we extend our deepest sympathy to Mrs. Sparks, his children, and his many friends,

That we shall forward a copy of this resolution to Mrs. Sparks,

That we shall incorporate this resolution in the minutes of the Society, and

That we shall cause the resolution to be published in the Journal of the Arkansas Medical Society.

Inscribed by a Special Committee,
W. M. Hamilton, Chairman
John Laurens
Louis Tolbert

Editorial:

Cancer, A Major Unsolved Problem

ALFRED KAHN, JR., M.D.

In our aging population, cancer is becoming our major medical problem—along with accidents. Developments in medical science have removed many medical diseases which caused death and the prolongation of life results in a longer exposure time to the hazard of cancer. Cancer and cardio-vascular research should get the lion's share of research money grants.

Cancer poses many problems for research. For that matter how is one to define cancer. Actually, it might be defined as an imbalance between the body's ability to destroy abnormal cells and the inherent tendency of cancer cells to reproduce without conforming to pattern or function. It is evident that cancer cells are different than normal cells in both obvious and subtle ways; for example, cancer cells metabolize differently than do normal cells. Current research has shown that cells may be made cancerous in different ways, as by chemical substances, X-ray, viruses, etc. What do these diverse agents do to the cell that makes them different from their normal parent cell. It would appear that they upset some center in the cell which controls growth and function; in the normal cell these functions are controlled in the nucleus and apparently by the chromosomes and genes. Carcinogenic substance must in some way disturb the chemical arrangement in the cell nucleus to make them insensitive to authoritative control from the rest of the body; in other words they are autonomous instead of subservient. This is not entirely an intracellular problem. The body must have defenses against abnormal cells. It seems illogical to assume, although it is possible, that the body does not make abnormal cells; these abnormal cells are apparently removed; older cells are removed and replaced; in these instances the replacing cells conform to the body's shape and to the body's functional needs. Why is it that a cancer cell is not destroyed? Actually, in human volunteer studies cancer cells injected into the skin of healthy volunteers were soon destroyed; cancer cells

spread, for example, at surgery in a cancer victim spread like wildfire. In other words, the healthy body seems to have a means of destroying or removing aging or cancerous cells. What are the changes that destroy the body's ability to remove cancer cells within it? The equilibrium between cancer cell and body defense can be swayed by certain environmental factors within the body; cancer of the prostate seems to need some type of androgenic stimulation to grow, and is depressed by its absence or the presence of estrogens. The inverse is true of certain breast cancers—they thrive when they are exposed to estrogens.

Similar cancers seem to have different biological behavior. Why do some cancers metastasize when the original growth is very small and others metastasize only after a long period of growth at the original site? Physicians frequently find minute breast cancers at the limits of palpable detectability that have already spread to bone, liver, lung, and elsewhere. It appears that breast tumors which have a fairly clearly defined border have a much better cure rate than when the cancer has an ill defined border; does the body try to wall off the large well defined malignancy which metastasizes late and have poor defense against many ill defined strands of invading cancer in the indefinitely defined growth?

Early detection of a poorly "encapsulated" cancer may not be of very much help in effecting a cure by present day surgical means, and by the same token a comparatively late surgical excision of a cancer with a well defined border may result in a cure; this is not to be construed as an argument against the early detection and removal of cancer, but an example of cancers unpredictable biological behavior.

Another mystery is why do certain types of cancer seem to originate in multiple foci simultaneously? Do metaplastic islands of similar tissue suddenly become cancerous through the exposure to some modifying agent? In glandular organs as the pancreas, multiple islands of abnormal

epithelial cells are occasionally found at autopsy; perhaps this is the setting for subsequent multiple cancers to appear.

In the literature are statistics which tend to show that in a person having one malignancy there is a greater chance of getting a second new type of malignancy than a person who has never had a malignancy. The statistical validity of this concept has recently been questioned by some eminent oncologists. If it is a valid concept, it tends to promote the idea that cancer victims have less resistance to malignancy than do healthy people.

Even cancer detection is in a comparatively crude stage of development. Visual detection or palpation implies a growth of a size which could easily have already metastasized. Then, too, some cancers are

in locations not visible to X-ray or palpable. Many cancers of the gut grow away from the lumen and cannot be seen as an obstruction to the column of barium; discovery is made when the tumor spreads or gets large enough to be palpable. Occasionally, lung cancers of small size that should be visible on ordinary six ft. chest films are found by laminograms or at thoracotomy. Sarcomas of the posterior parietal wall may grow and spread enormously while giving no outward clues except weight loss, debility, and fever. Early detection of cancer is not always possible and even if accomplished does not insure a cure.

Cancer research is a problem with many facets. It is almost public enemy No. 1 in every sense.

MEDICINE IN THE NEWS

"Medical Schools Need Varied Incomes"

A gathering of top business executives with an interest in medicine heard Dr. Ward Darley make a plea for balance and diversification in sources of medical school income.

Speaking before the Council, Dr. Darley warned that medical schools should not and cannot be dependent upon a single source of income for operating purposes. Citing the various sources, Dr. Darley noted that income now comes from tuition, endowment, non-government grants for unrestricted purposes, governmental grants for teaching and training, research overhead, state appropriations, general university funds, payments from hospitals and clinics, and income from medical service plans. "Without proper diversification and balance, the stability and independence of medical education will be in jeopardy," he said.

Dr. Hyde Named Director Of New AAMC Division

The AAMC has chosen a world health authority to head its new Division of International Medical Education. He is Dr. Henry van Zile Hyde, assistant to the Surgeon General for International Health and chief of the Division of International Health, U. S. Public Health Service. Dr. Hyde will assume his new duties this month.

In his new position, Dr. Hyde, 55, will be responsible for the development and operation of the division, which is being established at the AAMC office with funds provided by the Rockefeller Foundation.

The new director received his medical degree from Johns Hopkins University School of Medicine and has served on the faculties of the Universities of Rochester and Syracuse, Albany Medical College and the Schools of Public Health at Harvard and Johns Hopkins.

Hyde has been the U. S. member of the Executive Board of World Health Organization since its inception, having been appointed by Presidents Truman, Eisenhower, and Kennedy. He continues to hold

this position. He has also been a member of the U. S. Delegation to each of the 14 World Health Assemblies of the WHO.

The new division is being established to promote interest in international cooperation in medical education; develop a coordinated plan to assist various agencies in the recruitment of American faculty for service abroad; assist overseas faculty to locate, on a protem basis, in this country, contribute what it can to improved educational opportunities for foreign graduates seeking advanced clinical and research training in the U. S.; and conduct forums for the exchange and discussion of information and ideas.

Doctors Have Problem Case Clinic

The Arkansas Academy of General Practice in cooperation with the University of Arkansas Medical School presented a problem case clinic on Gastrointestinal and Infectious Diseases in Warren. This clinic was made possible by a grant from Lippincott's "Medical Science" magazine.

The Clinic was divided into two parts. The first was held at the Bradley County Memorial Hospital and consisted of examination and discussion of patients from the Hospital. Attending doctors were asked to discuss some of their own problem cases. The second part was held at the Warren Country Club in the form of formal lectures by two members from the University of Arkansas Medical School, Dr. Kerison Juniper and Dr. Robert Abernathy.

"Booneville Hospital Construction Contract Signed"

The last obstacle left standing in the way of the Booneville Municipal Hospital was cleared when a contract for construction of the 22-bed medical facility was signed with the Manhattan Construction Co. of Fort Smith.

Charles I. Evans, chairman of the City Hospital Commission, said that the contract set the completion date at 240 calendar days after issuance of a work order. Final architectural plans, as approved by the U. S. Public Health Service and the Arkansas Board of Health call for a modern 13,000 sq. ft. brick and lightweight block building divided into six single and eight double patient rooms. In an emergency the single rooms can be converted to accommodate two beds, increasing the

total patient capacity to 28.

The hospital to be erected on a 5.51-acre site on Highway 10 West, will include an operating room, delivery room, emergency room, X-ray department, laboratory and a number of service facilities. All are designed to meet the increased demand of any reasonable future expansion.

Hospital May Open in December in Jacksonville

The Hospital Commission of the City of Jacksonville has been informed that the building program of the Rebsamen Memorial Hospital is progressing so rapidly that plans must be started for opening the hospital. The Commission has decided to follow the example of practically every hospital in the nation and is offering to dedicate rooms and areas of the hospital to families, businesses and individuals who wish to contribute to furnish these areas. These contributions range from \$100 to \$1,000 depending on the size and expense involved in furnishing these rooms. Anyone interested in such a contribution who has not been contacted by a member of the Hospital Commission may do so by calling anyone on the Commission.

Hospital Administrator Named

Dr. Thomas Wortham, chairman of the hospital commission of Jacksonville, announced that the commission has hired an administrator for the new facility, which is expected to open in December or January. The new administrator will be George Roth, a native of Judsonia. He is at present the Personnel Director of Arkansas Baptist Hospital in Little Rock. He has served as Administrator of the Hot Springs County Memorial Hospital and as Administrator of the Bradley County Memorial Hospital.

New Doctor at Leachville

Announcement was made that Dr. G. Wayne Taylor joined Dr. T. N. Rodman in the operation of Rodman's hospital at Leachville on July 10th. Dr. Taylor is a graduate of Manila High School and did his pre-med training at State College in Jonesboro obtaining his degree in Medicine at the University of Arkansas Medical School in Little Rock.

The new physician served his internship in the Baptist Hospital in Memphis where he took special training in X-ray work.

Two New Doctors Now at Hamburg

Two young doctors opened their practice at the Hamburg Clinic filling a great community need as the Clinic has been without a doctor since Dr. Frank and Dr. Mary Dulaney left. These doctors are Dr. Charles Hicks and Dr. Billy J. Jordan. Both doctors are graduates of the University of Arkansas Medical School.

New Doctor's Clinic to be Erected

Construction began at Conway for a new clinic for Dr. Robert L. Taylor. A contract for the work was awarded Con-Ark Builders of Conway. The building, to cost \$64,689, is to be located on the south end of the property Dr. Taylor purchased from the Missouri Pacific Railroad Company about three years ago. The building will face Parkway. The clinic is to contain 4,000 square feet with ample space for three physicians' offices and treatment rooms. A pharmacy, to be operated by Dale Palmer also will be included.

Legislative Auditors Ponder Shortage of Doctors in State

The Legislative Joint Auditing Committee wondered why more doctors weren't being graduated by the University of Arkansas School of Medicine. "They are averaging less than 80 graduate doctors," commented peppery Senator Roy S. Milum of Harrison during a review of the Medical Center audit. He said that the costly (\$7,457,001) facility once promised to turn out about 180 doctors a year to meet shortages and needs in the state.

"They say that their standards are high," explained Representative E. L. Mosley of Ouachita County. "They have to be to meet professional standards." "Are their standards too high?" Milum asked.

Later Milum inquired whether anyone was suggesting that the Center was "a closed organization" that "didn't want too many doctors available on the market." There were murmurs of denial and the subject was dropped.

Hospital Gets Mark of Sterling: Full Accreditation

Administrator Bob McCuiston of Forrest Memorial Hospital in Forrest City has been notified that the hospital has been fully accredited for the next three years. He received a letter from the Joint Commission of Accreditation of Hospitals in Chicago, Dr. Kenneth B. Babcock, director. What it means to the public is this:

1. Assurance of a safe and sound physical building with maximum precaution against a fire.
2. No exposure to communicable diseases.
3. Excellent facilities and equipment for diagnosis and other purposes.
4. Good dietary department, drug room, emergency services, and medical library.
5. A highly qualified medical staff, with surrounding nursing, technical and service personnel.
6. Maximum protection for the patient through certain procedures for care and medical records, consultations, etc.

The Joint Commission on Accreditation of Hospitals is made up of the following: American College of Physicians, American College of Surgeons, American Hospital Association and the American Medical Association.

State Medical Record Group Convenes

Sister Margaret Vincent Blanford, administrator of St. Vincents Infirmary, addressed the annual state convention of the Arkansas Association of Medical Record Librarians at the Arlington Hotel in Hot Springs. Her topic was "Responsibility of the Medical Record Librarian to the Administration of the Hospital".

Sister Margaret Vincent Blanford is a graduate of the Nazareth School of Nursing in Lexington, Kentucky and has held her present position since 1955. She is past president of the Arkansas Conference of Catholic Hospitals and the Little Rock Hospital Council. She was selected Woman of the Year of Greater Little Rock for 1960.

Another speaker was Dr. Thomas M. Durham, Jr., of Hot Springs, widely-known orthopedic surgeon. His topic was "Orthopedic Nomenclature".

The Month in Washington

From Washington Office AMA:

Washington, D. C. — The American Medical Association opposed three major provisions of a bill (S. 1552) that would greatly increase the powers of the federal government in regulation of the ethical drug industry.

These three provisions would turn over to the Department of Health, Education and Welfare and the Food and Drug Administration the responsibility for (1) relaying of drug information to physicians, (2) selecting the names of new drugs, and (3) deciding whether a drug is of value in treating human ills.

The AMA didn't take a position on the bill as a whole because certain of its provisions, "such as the Sherman Act and patent law amendments, are outside our area of competence."

Dr. Hugh H. Hussey, Jr., Chairman of the AMA's Board of Trustees and Dean of Georgetown University (Washington, D. C.) School of Medicine, was the chief AMA witness at the opening of hearings on the legislation before the Senate Antitrust and Monopoly Subcommittee headed by Sen. Estes Kefauver (D., Tenn.). Dr. Hussey was accompanied by Dr. Ernest B. Howard, Assistant Executive Vice President of AMA, and C. Joseph Stetler, AMA's General Counsel.

With Congress trying for adjournment by about Sept. 1 and much "must" legislation still to be acted upon, it appeared highly unlikely that Congress would complete action on the drug legislation this year.

Dr. Hussey reviewed for the subcommittee AMA's 70-year-record of taking the lead in endorsing legislation designed to insure the purity of drugs and food. The AMA carried on intensive legislative efforts in the field and "is generally credited with being one of the major forces that brought the first Pure Food and Drug Act into being" in 1906, Dr. Hussey said.

Dr. Hussey cited these AMA aims that "we, as physicians, are desirous of achieving:

"—We want all physicians to be well-trained and fully informed on all aspects of the practice of medicine.

"—We want this body of knowledge and reservoir of skills to include a high degree

of competence in the selection and proper use of drugs.

"—We want a continuing and expanding flow of useful drug products placed at the disposal of these physicians."

Dr. Hussey pointed out that the AMA already conducts an intensive program of informing physicians about new drugs and that this program is now in process of being greatly stepped up.

"The medical profession believes that the education of physicians is the responsibility and prerogative of the profession itself," he said.

Assigning responsibility for selecting names of new drugs to the federal government would merely be duplication of the program of drug nomenclature which has been operated for many years by the AMA and the pharmaceutical industry, Dr. Hussey declared. This program also has recently been refined and improved, and will continue to meet the need for an orderly system for selecting names for new drugs.

In the final analysis, it is the physician and the pharmacist who must know the non-proprietary names of drugs, he said. These two professions now direct this naming process, and "we do not believe the responsibility for designating and revising names should be assigned to a governmental agency," he said.

Regarding determination of the efficacy of a new drug, Dr. Hussey said:

"We believe that only the physician has the knowledge, ability and responsibility to make a decision as to what drug is best for a particular patient. He should not be deprived of the use of drugs that he believes are medically indicated for his patient by a governmental ruling or decision."

"Physicians seek to treat the medical problems of **individual patients**. A physician does not treat ten cases of hypertension, he treats ten individual patients, each of whom has a medical problem he has diagnosed as hypertension. He may find that the same dosage of the same form of the same drug will be efficacious in each and all of his ten patients.

"Or he may find that one or more of them need different dosages, or different forms of this same drug. He may, indeed, find that one, two or three of them are allergic to the non-active ingredients used

in this brand of the drug, and that a different brand, with other non-active ingredients, is the proper answer.

"Thus, in one patient, a specific dosage of a specific drug might be said to be efficacious. While in another, it would be described as totally ineffective.

"A physician can be told many things about a drug, including its chemistry, its mode of action and, to some extent, its toxic properties. But he must judge its efficacy."

Doctors Think of Building

Little Rock doctors are quietly discussing a proposal to construct their own office building on a West Side site from which they can drive at boulevard speeds to the major hospitals.

They are intrigued by the experience of a surprising number of American medical groups which have organized corporations to erect office buildings for members of their professions.

In Little Rock it is likely to be a substantial venture. The plan in some cities: Participating doctors pay rent to their own corporation, which ordinarily pays tax on its income, after depreciation, in a 30 per cent tax bracket. The income after taxes is first applied against the mortgage; any balance is invested in securities.

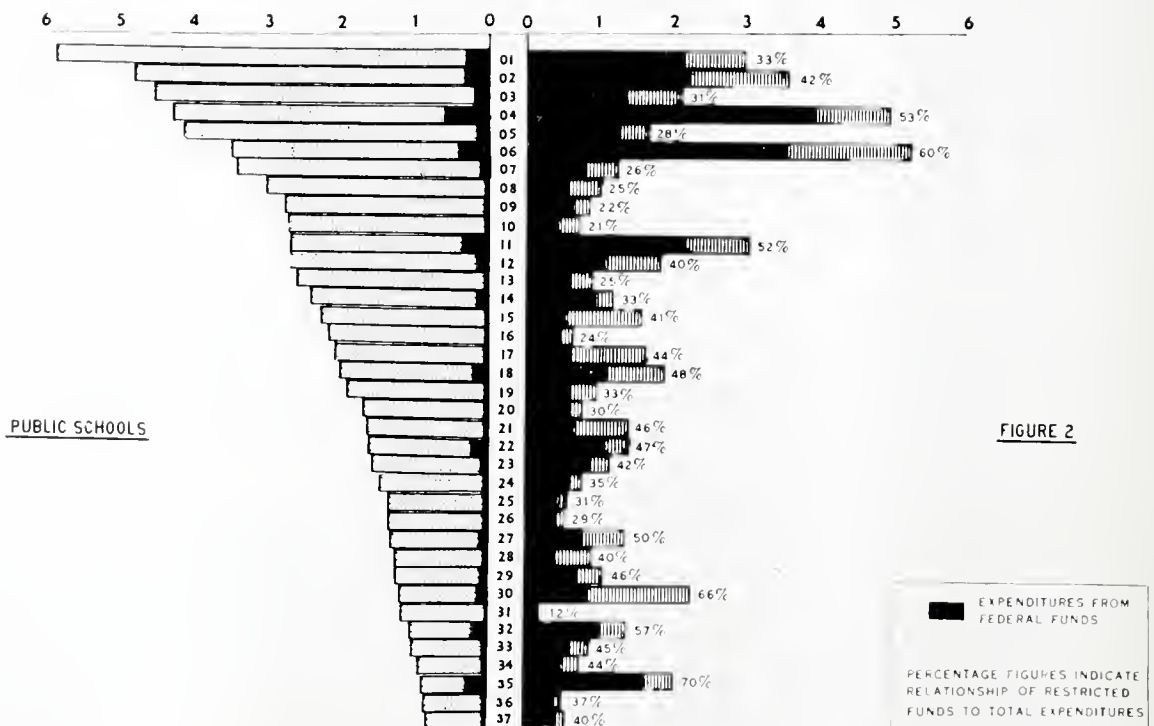
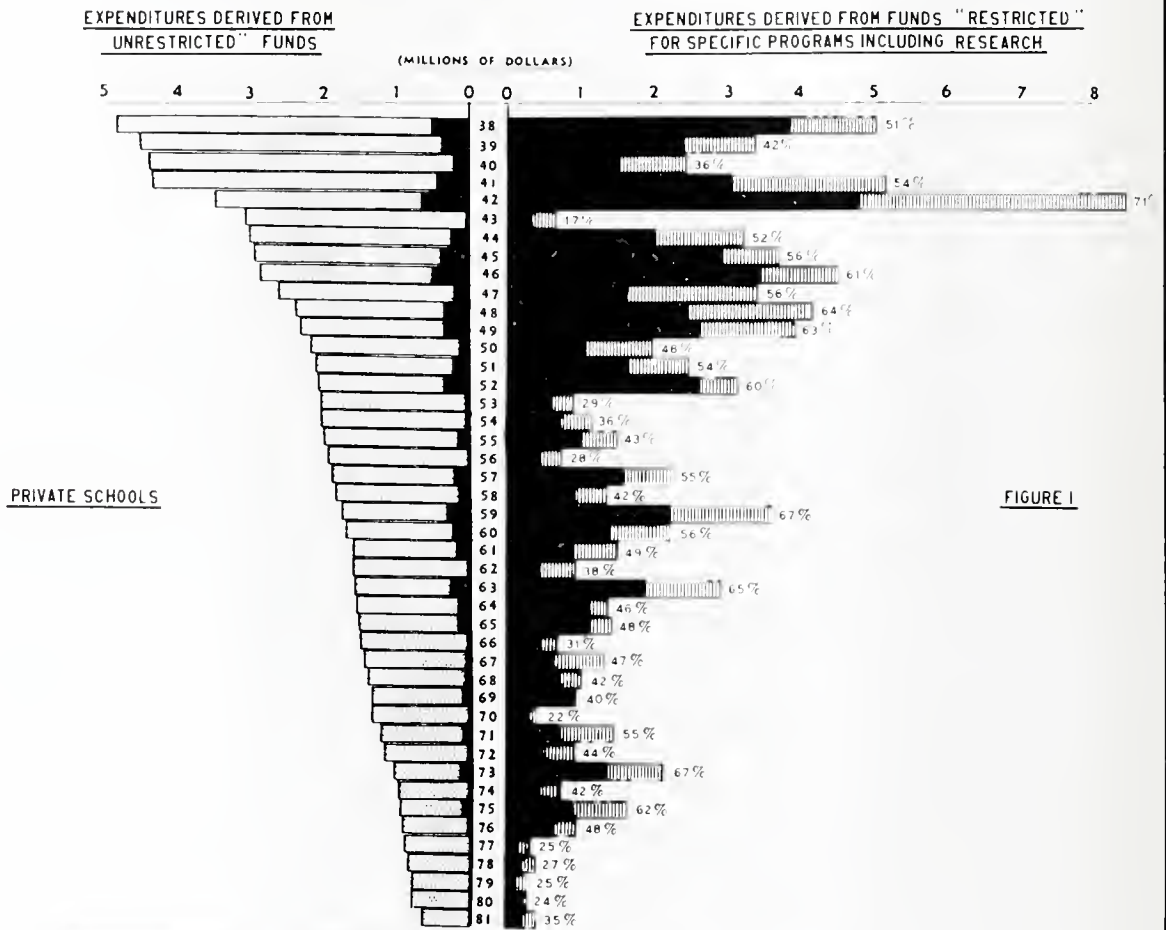
Since the corporation has an 85 per cent dividends-received credit and a 30 per cent tax bracket, the net levy on its investment income is only 4.5 per cent. An accumulation of revenue is permissible up to \$100,000, and even more when it is invested in other real estate.

A doctor's interest in such a corporation can be a source of income upon his retirement, leaders of the group say. If they decide to pay slightly more "rent" than needed to annual obligations, the extra money could go toward retiring the indebtedness eventually, instead of being distributed currently as taxable income to the doctors.

Relationship of Expenditures Derived From Funds "Restricted" for Specific Programs To Total Expenditures Derived From All Sources in 1959 (44 Private and 37 Public Four-Year Medical Schools)

The sources of financial support of medical colleges readily fall into two categories:

RELATIONSHIP OF EXPENDITURES DERIVED FROM FUNDS "RESTRICTED" FOR SPECIFIC PROGRAMS
TO TOTAL EXPENDITURES DERIVED FROM ALL SOURCES IN 1959
(44 PRIVATE AND 37 PUBLIC FOUR-YEAR MEDICAL SCHOOLS)



1. Expenditures derived from "unrestricted" funds which the medical school can use in any way it sees fit.

2. Expenditures derived from funds granted by outside agencies that are "restricted" for particular purposes. There is no fixed relationship between the expenditures for these programs and the school's over-all expenditures. But in attempting the analysis of the financing of medical education, this relationship is nevertheless important.

Figures 1 and 2 on the opposite page show the relationship between expenditures from "restricted" funds and expenditures derived from all funds for the fiscal year 1958-59. The presentation is made separately for private and public four-year schools.

It can be argued that some "restricted" funds support programs that are so fundamental to the primary goals of the medical college that they can be considered as income for "non-restricted" activities. For the purposes of this presentation, however, we are considering expenditures from funds that are restricted in any way for whatever purpose as belonging in the "restricted" category. Included are Federal grants restricted for teaching and training, endowment income restricted for libraries or other purposes, as well as all funds restricted for research. Presenting expenditure data in this way frees one of the responsibility of exercising judgment as to the categorization of any source of expenditure except that from payments for research overhead. Since overhead payments are to help compensate the medical school for administrative and other indirect costs of research and since the indirect costs of all medical school programs must be met from unrestricted funds, payments for research overhead have been added to funds available for unrestricted purposes.

In Figures 1 and 2 the schools are ranked in the descending order of magnitude of expenditures from "unrestricted" funds. These expenditures are shown on the left side of the chart. For each school the corresponding expenditures from "restricted" funds are shown on the right. Federal funds are shown in black. The percentage figures indicate the relationship between expenditures derived from funds "re-

stricted" for specific programs to total expenditures derived from all sources.

The lack of uniformity in these percentage figures is readily apparent. For the public schools, they range from 12% to 70%; the over-all percentage is 40%. For the private schools, the range is from 17% to 71% and the over-all percentage is 51%.

In view of the added costs assumed by the medical schools in the administration of "restricted" funds, the wide variation among schools in the proportion of "restricted" to "non-restricted" funds could give rise to the question of optimum limits in the proportion of expenditures from "restricted" funds to total expenditures. Obviously this is something each school must decide for itself.

Limitations upon the use of funds restricted to specified research projects emphasize the need for institutional research grants approved by the last Congress. The latitude provided to the schools in determining the research programs which are to be supported by these institutional grants will permit the medical schools to better coordinate and balance their research programs and will also permit the schools without the means of financing research from their own funds to set up the development of this very important activity.

Submitted by the Division of Operational Studies of the AAMC, 2530 Ridge Avenue, Evanston, Illinois.

ANNOUNCEMENTS

ATS Annual Meeting

The American Thoracic Society invites submission of abstracts of papers relating to the general field of tuberculosis and other respiratory diseases for presentation at its 57th Annual Meeting to be held in conjunction with that of the National Tuberculosis Association in Miami Beach, Florida, May 20-23, 1962. Abstracts must be in the hands of the program committee not later than January 5, 1962. Eight copies should be submitted. Each abstract should be limited to 300 words. Further information regarding the submission of

FEATURES

abstracts may be obtained by writing Asher Marks, M.D., Chairman of the Medical Sessions Committee, American Thoracic Society, 1790 Broadway, New York 19, N. Y.

AAMC 72nd Annual Meeting

Set aside November 13-15 and plan to attend the Association's 72nd Annual Meeting at the Queen Elizabeth Hotel in Montreal, Canada. And those of you who are interested in attending the Medical School-Teaching Hospital Section and Continuing Group on Student Affairs should mark your calendars for Saturday and Sunday, November 11 and 12. The Sunday morning session of the Medical School-Teaching Hospital Section will deal with the administrative relationships between medical schools and their affiliated hospital—thus this meeting should be of particular importance to medical school administrators as well as deans and other medical school personnel and physicians.

The Association will again be host to the deans from Central and South America. Also an added attraction will be a tour of Montreal.

"Urology Award"

The American Urological Association offers an annual award of \$1,000 (first prize of \$500, second prize \$300, and third prize \$200) for essays on the result of some clinical or laboratory research in Urology. Competition is limited to Urologists who have been graduated not more than ten years, and to hospital interns and residents doing clinical or laboratory research work in Urology. Animal research is not necessary.

The first prize essay will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Bellevue-Stratford Hotel, Philadelphia, Pennsylvania, May 14-17, 1962.

For full particulars write the Executive Secretary, William P. Didusch, 1120 North Charles Street, Baltimore 1, Maryland. Essays must be in his hands before November 15, 1961.

The Interstate Postgraduate Medical Association of North America Announces:

"THE SCIENTIFIC ASSEMBLY" to be held in Cleveland, Ohio—November

13-16, 1961. The Co-Sponsor is the Ohio Academy of General Practice. Features will include luncheons, lectures, color television, demonstrations, and etc. For the ladies there will be a Hospitality Tea, Special Luncheon with Style Show by Halle Brothers and an illustrated lecture on "Oddity in Gems." Time for shopping and the theatre. The Annual Dinner: Illustrated lecture on the underwater adventures of Doctor and Mrs. George Crile, under the title, "SUNKEN SILVER". A program all will thoroughly enjoy! Cost tax deductible as part of educational conference expense. ACADEMY CREDITS acceptable for a maximum of 25 hours of category II, credit by the American Academy of General Practice. All details on luncheons, hotel reservations, etc., can be secured by writing Erwin R. Schmidt, M.D., Box 1109, Madison 1, Wisconsin.

THIRTEENTH POSTGRADUATE ASSEMBLY IN ENDOCRINOLOGY AND METABOLISM

Under the Co-Sponsorship of
The Endocrine Society and
The National Institutes of Health
Bethesda, Maryland
October 2-6, 1961

A comprehensive review of clinical endocrine problems and current research activity in these areas will be presented. For further information, write to: Dr. Roy Hertz, National Institutes of Health, Building 10, Bethesda 14, Maryland. The fee will be \$100.00 for physicians, with a reduction to \$30.00 for Residents and Fellows. Enrollment limited to 100.

Dates to Remember

Annual meeting, Arkansas Academy of General Practice, Little Rock, Arkansas _____ Oct. 11-12, 1961
1961 Clinical Meeting AMA, Denver, Colorado _____ Nov. 27-30, 1961

Obituary

Dr. Walter Eberle, widely-known local physician of Fort Smith, died in a local hospital after a short illness. Dr. Eberle, 74, was a veteran of the first World War,

a member of the Sebastian County Medical Association and Arkansas State Medical Association.

He was a native of Fort Smith and a graduate of Jefferson Medical School in Philadelphia, Pa., and Fort Smith High School. He had practiced medicine in Fort Smith for some 50 years.

Dr. Herman L. Brown, member of the Arkansas Medical Society, died at the age of 53. He was a resident of Little Rock, and the funeral was held at Healey & Roth. Honorary pallbearers were members of the Medical Societies of Pulaski and Hot Spring Counties. Burial was at Roselawn Memorial Park.

PERSONAL AND NEWS ITEMS

Dr. Fred Henker, assistant professor of Psychiatry at the University of Arkansas Medical School, was the speaker at the Annual Dinner Meeting of the Sebastian County Mental Health Association at Fort Smith. Topic of his speech was "Opportunities and Difficulties Encountered in Helping People with Religious and Spiritual Problems".

Dr. Sam J. Kuykendall, thoracic surgeon of Little Rock, attended the American College of Chest Physicians in New York City in June where he was taken into Fellowship in the society.

Lloyd E. Gary, M.D., is entering practice under the specialty of Obstetrics and Gynecology.

Dr. Bailey Goes to Paris, then Madrid

H. A. Ted Bailey, Jr., M.D., attended the International Congress of Ear, Nose, and Throat in Paris, France in July and also attended a meeting in Madrid, Spain. This was an International Symposium on Ear Surgery and was by invitation only.

Dr. Riggs, Jr. Receives Award from Mayo

Dr. Byron L. Riggs, Jr., a fellow in medicine of the Mayo Foundation, Rochester, Minn., is one of 19 fellows of that

Foundation to receive awards from 11 donors at Mayo Foundation House.

Dr. Riggs is the son of Mrs. Byron L. Riggs, 808 West Grand, Hot Springs, and the late Mr. Riggs. He received the Postgraduate Travel Award which is conferred for high achievement in internal medicine.

Alda Collier Honored by Medical Society

The Columbia County Medical Association honored **Miss Alda Collier** for her many years service as a nurse in Columbia County.

Held at Martel's Lakeside Lodge, the Society recognized Miss Collier for her 44 years nursing in the county. She began in 1917. Since 1947 she has been a nurse at the Magnolia City Hospital. **Dr. Charles Weber**, president of the Society, presented Miss Collier with a gold charm bracelet in recognition of her long service and for her outstanding service to the doctors. Miss Collier is retiring from the nursing profession.

Dr. Tate Named to AMA 50-Year Club

Dr. A. B. Tate of Russellville has been named to membership in the American Medical Association's 50-year club. The honor bestowed on Dr. Tate recognizes physicians associated actively with the practice of medicine for 50 years or more.

Doctor Honored at Bentonville

Dr. R. M. Atkinson, local physician and surgeon, was advanced to an associate member of the International College of Surgeons at the regular meeting of the convocation of the organization in Chicago. The International College of Surgeons is a worldwide organization of surgeons with members in most of the civilized countries of the world. Dr. Atkinson has been a member of the organization since 1947.

Physician Honored at Dinner Meeting

A surprise dinner was held for **Dr. Arnold** of Prairie Grove at the City Cafe in Prairie Grove by the Washington County Medical Assistants. Guests were **Dr. and Mrs. Sidney Arnold** and **Dr. and Mrs. Jeff Baggett**.

A speech thanking Dr. Arnold for his two years as advisor for the group was made by Mrs. Johnnie Harness and a gift

of appreciation from the group was presented by Mrs. Nona Allen.

Ft. Smith Man First to Graduate Under Dr. A. S. Garnett Scholarship

Dr. Jerry A. Leazure of Fort Smith was the first student to graduate from the University of Arkansas School of Medicine, Little Rock, under the scholarship of the Dr. Algernon Sidney Garnett Memorial Fund.

The Fund was established in memory of Dr. Garnett, a pioneer Hot Springs physician, four years ago by Mrs. E. S. Garnett of Little Rock and Camden, widow of E. S. Garnett, son of the late Dr. A. S. Garnett.

Strict Rules for Hospital Visitors

The Pulaski County Medical Society has opened a campaign to cut down on the number of visitors to patients in hospitals. The new rules which went into effect August 1 are:

1. Visiting hours 3 to 4:30 and 7 to 8:30 in the evening.
2. Visitors must check in at a registration desk which each hospital has set up in its lobby. At the desk, tickets allowing two visitors at a time will be issued. The tickets must be returned when the visitors leave.
3. No visitors under 14 years of age are allowed.
4. One member of the family of a patient is allowed to stay with certain patients—women in labor, children under 14, surgical patients in the first 24 hours after surgery, and critically ill patients. To stay overnight with a patient, a visitor must have permission from the nursing supervisor on that floor.
5. Note paper for messages is furnished visitors who arrive before or after visiting hours. The messages are delivered promptly to the patient.

AMA Breakfast Sponsored By Arkansas Medical Society

Mary Shelton and **George Stinson** of Camden furnished the program at the Arkansas Breakfast in the Gold Ballroom of the Statler-Hilton Hotel in New York City Monday, June 26th. This breakfast was sponsored by the Arkansas Medical So-

ciety as the opening event of the annual convention of the American Medical Association which had a total registration of around 50,000 people and was known as the greatest medical show on earth. The breakfast was attended by the officers and members of the House of Delegates of the American Medical Association as well as the executive secretaries of all state medical associations and many special guests making a total of 300 leading people.

Dr. John Miller Back from Panama

Dr. John Miller, physician from Stephens, returned from two weeks of medical and surgical service among the primitive San Blas Indians of Panama.

This mission was jointly sponsored by the Home Mission Board and the Brotherhood Commission of the Southern Baptist Convention.

Dr. Miller donated his services and his expenses were paid by the local First Baptist Church. This was his second trip to work among these people, the first having been in 1959.

Contributors to the American Medical Education Foundation from the State of Arkansas during May 1961:

Frank Clark, El Dorado.....	\$ 5.00
Ellery C. Gay, Little Rock.....	25.00
Mrs. G. Landers, El Dorado	6.00
Woman's Aux. to the Ark. Med. Soc.	22.50
Bowie-Miller Co. Woman's Aux.	25.00
Independence Co. Woman's Aux.	2.50
Past Presidents of Medical Aux.	14.00
Pope-Yell County Medical Aux.	5.00
Union County Medical Auxiliary ..	13.50
	<hr/>
	\$118.50

Proceedings of Societies

Arkansas Medical Society
Fort Smith, Arkansas
Dear members of the
Arkansas Medical Society:

This is a report of your president on the Arkansas Breakfast for the House of Delegates at the annual AMA meeting in New York City.

The breakfast was well attended. I understand there were 294 present. About



Dr. R. B. Robins introduces Mr. George Stinson, Vice President of the National Steel Company, principal speaker at the Arkansas Breakfast in the Statler-Hilton Hotel, New York City, June 26th. The breakfast is an annual affair given by the Arkansas Medical Society for members of the House of Delegates of the American Medical Association, the Board of Trustees, and Executive Secretaries of the State Associations. 294 persons attended.

24 of these were from Arkansas.

Breakfast began with the singing of "God Bless America" led by Mr. and Mrs. Bill Shelton. The invocation was given by our own Dr. L. H. McDaniel. A brief address of welcome was given by your president and the guests at the head table were introduced by delegates, Dr. Kolb and Dr. Richardson.

Dr. R. B. Robins then introduced Mrs. Shelton, an accomplished musician and entertainer, who gave a very entertaining forty-five minutes of song and recitations.

Dr. Robins then introduced Mr. George Stinson who was reared in Camden and is now Vice-President and Secretary of the National Steel Corporation. Mr. Stinson gave a very interesting and thought-inspiring talk, stressing the return to the fundamental principles that this country was built upon. Each, Dr. Askey, President of the AMA, and Dr. Norman Welch, Speaker of the House of Delegates, spoke briefly to the group. It was interesting to me the interest shown by the members of the House of Delegates in the Arkansas

Breakfast. It is the outstanding social function for the House of Delegates. Many stopped to congratulate me and the Arkansas group on this breakfast expressing their enjoyment and pleasure and their looking forward to this function each year. I attended the 50 Year Club breakfast Tuesday morning. As most of you know this club was started by Dr. J. H. McCurry of Cash, Arkansas. It was well attended with about forty members present. Dr. McCurry was next to the eldest doctor there and the most active of them all. He desires all the help we can give him in building this organization. I must say that being a delegate to the AMA is a big job. There were over 100 resolutions referred to 10 reference committees who worked long hours passing on these. The exhibits at the Coliseum were excellent, in fact one could not get around to see all of them in one day. The displays covered three floors of the coliseum. I did not get around to sightseeing while in New York as I left Wednesday afternoon at 3:45 p.m. for home.

For those of you who have never at-

tended the AMA meeting let me recommend that you start making plans to attend next year when it meets in Chicago. I, too, recommend that you make a special effort to attend the House of Delegates and see the work that is done by these dedicated men in your behalf to improve the medical profession and welfare of the health care of our country.

Respectfully,

William A. Snodgrass, Jr., M.D.

President, Arkansas Medical Society

Harris New Medical Society Secretary

Paul Harris has become executive secretary of the Pulaski County Medical Society. He is the first full-time employee of the organization.

Dr. John W. Smith, society president, said a full-time secretary to handle the growing affairs of the organization has become necessary because of the vital role it plays in the health of Pulaski County and the state.

Harris, field representative and director of the State Christmas Seal Campaign for the Arkansas Tuberculosis Association the past 4½ years, also has been on the staff of the Pulaski County Tuberculosis Association for eight years. He is a native of Lonoke County.

Medical Society Holds District Meet

The members of the 4th Councilor District (Southeast Arkansas) of Arkansas Medical Society met at the Jefferson Hospital in Pine Bluff. A dinner followed by a scientific study was attended.

Dr. A. G. Sullenberger of Pine Bluff announced the speakers: Dr. H. A. Crane, Dr. J. W. James, Dr. A. K. Pollard, and Dr. T. E. Townsend, all of Pine Bluff. Dr. Sullenberger is president of the 4th Councilor District. Dr. H. W. Thomas of Dermott and Dr. T. E. Townsend of Pine Bluff are Councilor representatives to the State Society.

Actions of the House of Delegates

AMA—June 24-30, 1961

Osteopathy, medical discipline, communications, surgical assistants, drug legislation, general practice residencies, relations with allied health professions and services, and poliomyelitis vaccine were among the major subjects covered by 115 resolutions and 28 reports acted upon by

the House of Delegates at the AMA 110th Annual Meeting held June 25-30 in New York City.

Dr. George M. Fister of Ogden, Utah, member of the AMA Board of Trustees, was named president-elect of the Association. Dr. Fister will become president at the June, 1962, annual meeting in Chicago.

The AMA 1961 Distinguished Service Award was voted to Dr. Walter H. Judd of Minneapolis, physician and member of Congress, for his contributions as a medical missionary, humanitarian and statesman devoted to world peace.

Total registration with half a day of the meeting still remaining, reached 56,315, including 22,682 physicians.

Osteopathy

In considering a report of the Judicial Council and three resolutions on the subject of osteopathy, the House of Delegates agreed with the intent of the report and resolutions, but instead adopted the following statement of AMA policy:

"1. There can never be an ethical relationship between a doctor of medicine and a cultist.

"2. There can never be a majority party and a minority party in any science; there cannot be two distinct sciences of medicine.

"3. Recognition should be given to the transition presently occurring in osteopathy.

"4. It is appropriate for the AMA to re-appraise its application of policy regarding relationships with doctors of osteopathy.

"5. Policy should now be applied individually at state level according to the facts as they exist."

Medical Discipline

In a major move designed to strengthen the profession's disciplinary mechanisms, the House approved the conclusions and recommendations of the Medical Disciplinary Committee with only three word changes. The committee report concluded with a recommendation that "American medicine at the national, state and local level, maintain an active, aggressive and continuing interest in medical disciplinary matters so that, by a demonstration of good faith, medicine will be permitted to continue to discipline its own members when necessary."

Communications

Acting upon four resolutions related to the Association's public relations program, the House adopted a substitute resolution directing the Speaker of the House of Delegates to name seven elected members of the House as a special committee "to study and continually advise the Board of Trustees on the broad planning and coordination of all phases of communications of the AMA, so that the public and the members of the medical profession are properly and adequately advised of the policies and concern of the medical profession with respect to all phases and aspects of medical care for all people."

Surgical Assistants

In considering a Board report and two resolutions of the subject of surgical assistant's fees, the House approved the following five basic principles developed by the Judicial Council and the Council of Medical Service:

"1. Each member of the AMA is expected to observe the Principles of Medical Ethics in every aspect of his professional practice.

"2. Each doctor engaged in the care of the patient is entitled to compensation commensurate with the value of the services he has personally rendered.

"3. No doctor should bill or be paid for a service which he does not perform.

"4. It is ethically permissible for a surgeon to employ other physicians to assist him in the performance of a surgical procedure and to pay a reasonable amount for such assistance. This applies whether or not an assisting physician is the referring doctor and whether he is on a per-case or full-time basis. The controlling factor is the status of the assisting physician.

"5. Under all other circumstances where services are rendered by more than one physician, each physician should submit his own bill of the patient and be compensated separately."

Efficacy of Drugs

The House strongly endorsed a Board report which pointed out the problems that would result from Amending the Food, Drug and Cosmetic Act to authorize the Food and Drug Administration to de-

termine the efficacy, as well as the safety, of a prescription drug prior to the approval of a new drug application.

General Practice Residencies

Eight resolutions were introduced on the subject of creating new two-year residency training programs in general practice. The House agreed that there appears to be a need for such programs for those individuals who desire more experience in obstetrics and surgery than may be available in the currently existing Family Practice Program.

Relations with Other Health Professions and Services

The House considered a report and 12 resolutions dealing with various aspects of medicine's relationships with allied health professions and services, including optometry. They accepted a suggestion for establishment of a new Commission to Coordinate the Relationships of Medicine with Allied Health Professions and Services. It will be composed of seven members appointed by the Speaker of the House.

Polio Vaccine

The House approved a report by the Council on Drugs on the present status of poliomyelitis vaccination in the U. S. and urged that it be made available to all physicians through the most effective communications media. The report provides the practicing physician with a reliable series of answers to the many questions which will arise during the change-over from Salk vaccine to oral vaccine.

Miscellaneous Actions

The House approved the "Guides to Physician Relationships with Medical Care Plans."

The House reaffirmed its support of the Kerr-Mills program for the needy and near-needy aged and its opposition to any legislation of the King-Anderson type.

The House approved a markedly expanded drug information program submitted by the Board of Trustees and the Council on Drugs.

The House adopted the final report of the Special Study Committee of the Council on Medical Education and Hospitals and recommended that copies be sent to all medical school deans in the United States.

FEATURES

The House decided to hold the 1963 Clinical Meeting in Portland, Oregon, instead of Las Vegas, Nevada, as recommended by the Board.

The House approved a plan by the new AMA Department of International Health to cooperate in the recruitment of volunteer physicians for emergency medical service in foreign mission fields.

The House agreed to an increase of \$20 in the annual AMA membership dues to be implemented over a period of two years: \$10 on January 1, 1962 and \$10 additional on January 1, 1963.

The House discontinued the Association's General Practitioner of the Year award.

The House opposed legislative and administrative mandates which would compel physicians to prescribe drugs, or require pharmaceuticals to be sold by generic names only.

The House reaffirmed the Association's opposition to compulsory inclusion of physicians under the Social Security system.

The House urged immediate legislation that will provide strong economic motivation for the construction and maintenance of fallout shelters.

The House disapproved two resolutions which would have discontinued the scientific activities at the Clinical Meeting.

The House urged immunization campaigns against both tetanus and influenza.

The House asked state and county medical societies to give full support to the First National Congress on Medical Quackery to be jointly sponsored next October 6-7 in Washington, D. C. by the AMA and the Food and Drug Administration.

The regular session of the Arkansas Radiological Society has elected the following officers, their term expiring April 23, 1962:

President—Dr. Joseph A. Norton, 843 Donaghey Building, Little Rock, Ark., FR 6-1814.

Vice President—Dr. Joe B. Scruggs, Jr., Arkansas Baptist Hospital, Little Rock, Ark., FR 4-3351.

Secretary-treasurer—Dr. Charles Anderson, 1108½ Poplar, Pine Bluff, Ark., JE 4-8651.

Councilor—Dr. Joseph D. Calhoun, 607

Donaghey Building, Little Rock, Ark., MO 4-3824.

Alternate Councilor—Dr. Ernest A. Mendelsohn, 1500 Dodson, Fort Smith, Ark., SU 2-4092.

STATEMENT OF THE ARKANSAS MEDICAL SOCIETY

Re: H.R. 4222, 87th Congress
To the Ways and Means Committee
U. S. House of Representatives
by J. J. Monfort, M.D.

Mr. Chairman and
Members of the Committee:

The Arkansas Medical Society appreciates this opportunity to express its views on H.R. 4222. I am Doctor J. J. Monfort of Batesville, Arkansas, where I have practiced medicine for twenty-five years. I am past president of my county medical society, and a former member of the Council of the Arkansas Medical Society for my district. For several years I served as secretary of the State Medical Society and I am its immediate past president. I am in the private practice of medicine, limiting my work to surgery. I am a member of the American College of Surgeons and the American Academy of General Practice.

The Arkansas Medical Society is comprised of 1,260 individual physicians in sixty county medical societies. There are approximately 1,500 licensed M.D.'s in the



Left: Congressman Wilbur Mills. Right: J. J. Monfort, M.D.

FEATURES

State, so our organization represents 84% of the doctors in Arkansas.

The Society was organized in 1875, and its original purposes, unchanged to this day, are:

1. To extend medical knowledge and advance medical science;
2. To elevate the standard of medical education, and to secure the enactment and enforcement of just medical laws;
3. To promote friendly intercourse among physicians;
4. To guard and foster the material interests of its members and to protect them against imposition;
5. To enlighten and direct public opinion in regard to the great problems of State Medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life; and
6. To maintain medical ethics and to secure compliance with the art of medical practice.

The first medical school in Arkansas was started in 1876 as the result of the Society's efforts and has been supported by the Society through countless legislative battles every two years to the present. The present outstanding University of Arkansas Medical Center in Little Rock is a direct result of years of unremitting work and financial and time expenditures by the Society and its members. The State Board of Health was originally formed and has been supported ever since by the Medical Society.

The State Tuberculosis Sanatorium — with one of the best records in the nation — was established with the help of the Society. The State Cancer Commission, caring for medically indigent cancer patients and conducting cancer discovery clinics regularly throughout the State, has been operated for many years by members of the Society without any charge whatever to the patient or the State. There are innumerable other projects of the Society, which would take much too long to name. I think I can say that in the history of Arkansas there has been no worthy undertaking for the health of the people that has not been originated by the medical

profession, backed by it, and at least in some measure supported financially or with free professional services. Arkansas doctors have never requested, and do not receive, payment from the Welfare Department for professional services to welfare recipients.

The attitude of the medical profession in Arkansas has always been that medical care is as personal as a thing can be and it is a personal responsibility of the doctor and the patient or his family, or community, or the state. Only when all of these break down is there any need for outside help and interference. We favor the continued operation of the Kerr-Mills Law because we believe it comes closer to taking all of these things into consideration than any other federal legislation which could be written. Our Society favored its passage and went on record with our congressional delegation to that effect. When the law was passed, the Council of the Arkansas Medical Society formally approved it and publicly urged the state government to implement the law in Arkansas as expeditiously as possible.

As is so often the case, our willingness to do something had to be matched with money to do it. Accordingly, when our legislature met in January, we campaigned with its members to appropriate sufficient money to make Kerr-Mills effective in Arkansas. The result — with the OAA and MAA federal matching money and other funds available—will be a 12 million dollar program in Arkansas, a state with a population of only one million seven hundred thousand.

The plan for implementation of the Kerr-Mills legislation in the State of Arkansas will cover, for medical care purposes, 70,000 people in addition to those already covered by other government programs. It is anticipated that 6,000 to 7,000 people per month will receive services such as nursing home care, dental care, hospitalization, eye care and physicians' services.

The plan outlines payment for ten days of hospital care or a maximum of thirty days per illness in one hundred and eleven participating hospitals in the state. It authorizes payment for residents in out-of-state hospitals. The State Legislature has

appropriated two million dollars for the Medical Aid to the Aged Program and in order to speed the implementation of the program, the State Department of Welfare is urging all who are eligible to establish their eligibility prior to illness or the submission of claims so there will be no delay in caring for these patients. The Commissioner of Welfare states that there are 3,646 beds in licensed nursing homes at the present time, and there are 24 nursing homes that have recently opened, are ready to open, or are in the planning stage as Arkansas prepares to implement the Kerr-Mills legislation.

The Arkansas Medical Society has supported medical and hospitalization insurance policies for people over 65 and these are currently available in our state by Blue Cross-Blue Shield and various commercial insurance companies.

In Arkansas the Bureau of Census statistics show that there are 194,000 people age 65 and over. Of this number 103,600 are covered by social security and 37,265 are gainfully employed. 55,300 persons are receiving Old Age Assistance; among these there are 1,394 cases of hospitalization per month at an average cost of \$133.09, totaling \$2,226,269 for the year.

The total nursing home population in Arkansas is 3,646. As of June 1, 1961, 2,487 of these were public assistance cases. This does not include 60 Aid to the Blind cases and 378 Aid to the Permanently Disabled cases.

In view of the foregoing activities of the State of Arkansas in providing for the Medical Care of our Aged, we feel that H.R. 4222 will not furnish any care needed and not provided under the Kerr-Mills Law. An official of the Arkansas State Department of Welfare states unequivocally that the Kerr-Mills Law is **going to work** in Arkansas and that it will adequately cover the medical services of all the aged citizens of Arkansas who need help.

H.R. 4222 will not provide for 36 to 38 thousand of our indigent citizens who are currently covered under the Kerr-Mills legislation. It will only be an added tax burden on a class of our citizens who can least afford it. The majority of the people in my area are self-employed and the Social Security tax is now 4½%. If the tax is

increased, it will work a hardship on most of these people. It is my opinion that the situation with relation to health care of the aged in Arkansas does not justify forcing our aged citizens under the bureaucratic control set up by the King-Anderson Bill.

In conclusion, the Arkansas Medical Society feels that Social Security provision for medical care is unnecessary in caring for our older citizens.

We appreciate the opportunity that you have afforded us in voicing our objection to the passage of H.R. 4222.

New Members . . .

Dr. Charles E. Hicks is a new member of the Ashley County Medical Society. He is a native of Monticello and received his preliminary education at Hendrix College from which he received a B.S. degree. He was graduated from the University of Arkansas School of Medicine in 1960. Dr. Hicks served an internship at Arkansas Baptist Hospital. He is a general practitioner with the Hamburg Clinic in Hamburg, Arkansas.

A new member of the Ashley County Medical Society is **Dr. Billy J. Jordan**. He is a native of Crossett, Arkansas, and received his preliminary education at Crossett High School. He was graduated from the University of Arkansas School of Medicine in 1960. Dr. Jordan is a general practitioner with the Hamburg Clinic in Hamburg.

The Miller County Medical Society announces that **Dr. James C. Burroughs** has been added to its roster of members. A native of Texarkana, he attended the University of Arkansas from which he received a B.S. degree. His M.D. degree was received from the University of Arkansas School of Medicine in 1957. Dr. Burroughs is a Pediatrician with his office at the Smith Clinic in Texarkana.

Dr. William Thompson Dungan is a new member of the Pulaski County Medical Society. He is a native of Little Rock and

received his preliminary education at Vanderbilt University from which he received a B.S. degree. His M.D. degree was obtained from the Vanderbilt Medical School in 1954. Dr. Dungan is an assistant Professor of Pediatrics at the University of Arkansas Medical Center.

Book Reviews

COMMUNICABLE AND INFECTIOUS DISEASES. By Franklin H. Top, A.B., M.D., M.P.H., F.A.C.P., F.A.A.P., F.A.P.H.A., Professor and Head, Department of Hygiene and Preventive Medicine, State University of Iowa, Iowa City, Iowa; Director, University Department of Health, and Director, Institute of Agricultural Medicine, State University of Iowa; Consulting Director, State (of Iowa) Hygienic Laboratories; Consultant in Infectious Diseases, University Hospital, Iowa City, Iowa; Consultant, Communicable Disease Center, U. S. Public Health Service, Atlanta, Ga.; formerly Professor of Epidemiology, School of Public Health, and Professor of Pediatrics, College of Medical Sciences, University of Minnesota, Minneapolis, Minn.; formerly Clinical Professor of Preventive Medicine and Public Health, Wayne State University College of Medicine, Detroit, Mich.; and formerly Director, Herman Kiefer Hospital, Detroit, Mich. Fourth Edition, illustrated, pp. 812, published by The C. V. Mosby Company, St. Louis, Mo., 1960.

Dr. Top's textbook is written by various authors. It is well organized and is presented along conventional lines for a textbook on communicable and infectious diseases. Specific attention has been given to a discussion of infection and immunity and there is a chapter on chemotherapy and antibiotic agents. There is a great revival of interest in the cross infection of patients in hospitals due to the recent investigations on staphylococcal infection. The authors present some discussion of the management of communicable diseases in the home and in the hospital. The book is well written. The descriptions of the various diseases are clear. The newer virus diseases are discussed briefly—such as the enteroviruses. There are good illustrations. The book is readable but is not encyclopedic. The book is recommended to medical students and practitioners. AK

MEDICAL PHARMACOLOGY. Principles and concepts. By Andres Goth, M.D., Professor of Pharmacology and Chairman of the Department, The University of Texas Southwestern Medical School, Dallas, Texas, pp. 551, illustrated, published by The C. V. Mosby Company, St. Louis, 1961.

This textbook, as the author states, is written primarily for students and practitioners. It is well written and well organized. There are abundant formulas and graphs. A few pictures are

also present. The book is readable and the writing style is not difficult to follow. The book has made a very obvious effort to condense much of the information seen in some textbooks on pharmacology by omitting or merely mentioning related compounds. Although this is a help in teaching, it prevents the book from being encyclopedic enough to be an important reference book. The reviewer is favorably impressed with the physiological approach used by the author. There is a chapter on antibiotics which, although adequate, is really deemed too short in light of current knowledge. The chapters on the treatment of parasitic diseases are very short and could be expanded with benefit to the student.

This book is recommended as a short but well organized textbook of Pharmacology. AK

Ciba Foundation Symposium on CONGENITAL MALFORMATIONS, edited by G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P. and Cecilia M. O'Connor, B.Sc., illustrated, pp. 308, published by Little, Brown and Company, Boston.

Congenital malformations are being better understood as the chemistry of congenital defects is explored. Great assistance has also come from histological studies of chromosomes and smaller particles which are capable of controlling body characteristics. Malformations represent such a group of "mistakes" in heredity. Discussions in this book include those of chromosomes, the effect of certain chemicals, studies of anencephaly, the role of prediabetes and hypothyroidism, etc. This book does not have wide interest for the practicing physician although it is recommended for the specific articles contained therein. AK

TUBERCULOSIS ABSTRACTS

Sponsored by
The Arkansas Tuberculosis Association

RESUSCITATION OF THE MORIBUND ASTHMATIC AND EMPHYSEMATOUS PATIENT

Mechanical means of treatment are called for when patients are near death from bronchial obstruction. Ventilation can be induced by a manually operated portable resuscitator, followed by procedures to draw out viscid mucus.

KURT O. LEONHARDT, M.D., *New England Journal of Medicine*, April 20, 1961.

The increasing awareness of a relatively high mortality in severely asthmatic and emphysematous patients, whether due to a better understanding of the pathophysiology involved or to a changing character of the disease, appears much more realistic than the attitude of ten years ago when death from an attack of bronchial asthma

was considered rare.

In a three-year period, while an anesthesiologist at a 275-bed general hospital of a medium-sized city, I was consulted in the emergency treatment of five moribund patients—three in status asthmaticus and two with advanced pulmonary emphysema. All these patients were considered moribund by the attending internists, that is, they were expected to die within a matter of minutes. They were either unconscious or semicomatose, with severe cyanosis and in marked hypoventilation.

PRECONCEIVED APPROACH

These five consecutive cases were successfully treated by means of resuscitative procedures. The importance of a preconceived and active approach in this emergency situation must be emphasized. The technical details of the method of resuscitation are simple and within the scope of every practicing anesthesiologist. The basic equipment is modest and should be readily available in every hospital. Decisive use of these available skills and devices may be of benefit to many moribund patients with obstructive hypoventilation.

In two of the cases, ventilation was started with bag and mask. A mixture of oxygen and helium was used in one case and oxygen alone in another. In the other three cases, a bellows-type Kreiselman resuscitator was employed, using room air only.

After ventilation had been started, in each case an endotracheal tube was inserted by the nasal route and suctioning of the tracheobronchial tree was alternated rapidly with ventilation. In the last two consecutive cases, the tube was connected with a Bennet respirator during the recovery phase to maintain normal breathing.

Drugs used with the mechanical measures were theophylline ethylenediamine, hydrocortisone, and epinephrine. Aerosols were also used in two cases.

Stripped of any incidental element, the principle of the method is a mechanical one, that is, the prolonged use of the suction-ventilation cycle to overcome the obstructive crisis. Although bronchial asthma and pulmonary emphysema are complex diseases, a purely mechanical problem is involved in the terminal phase.

Psychosomatic and allergic factors,

broncho-spasm, infection, organic changes of the bronchi and alveoli, disturbances of the ratio of ventilation to blood flow and a decreased diffusing capacity all play their parts in the natural history of the process. However, at the time of the crisis the many aspects are reduced to the clinical picture of generalized obstructive hypoventilation. This change appears when the work of breathing exceeds the limits of compensation and large amounts of viscid mucus begin to accumulate. Respiratory acidosis and anoxemia increase rapidly and add central-nervous-system depression to the failure of pulmonary respiration. These cases have advanced beyond the reach of drug therapy. A mechanical means of treatment is called for to cope with a mechanical cause.

RESPIRATOR A HELP

The use of a well-constructed respirator can be of great help in the recovery period after the mechanics of breathing have been normalized to the extent of complying with the physical characteristics of the machine. It guides the patient through the critical hours, guarding against the ever-present danger of a relapse. It also provides for intensive aerosol therapy, with bronchodilators, antibiotics, and detergents being used as necessary.

The danger of rupturing alveoli by positive pressure applied to the airways is overrated in general and especially in patients with severe obstruction. The rigidity of the muscles, the very high resistance in the airways, and the generalized nature of the obstructive process are the reasons that high inspiratory pressure of a short duration is not only tolerated but also required for good results. Occasionally, however, this complication may constitute a calculated risk, and equipment for decompression of a tension pneumothorax should be available. By the same token, the presence of an intrathoracic pneumothorax or of mediastinal emphysema is a contraindication to the use of any positive-pressure method.

A second possible danger of high-pressure ventilation is impairment of venous return and a fall of cardiac output. This is especially true for patients with a low blood volume or capillary damage. In the present study, no marked cardiovascu-



LOMOTIL[®]

(brand of diphenoxylate hydrochloride with atropine sulfate)

- * lowers motility
- * **controls diarrhea**

Lomotil brings prompt symptomatic control in diarrhea, either acute or chronic.

Both pharmacologic and clinical evidence indicate that *Lomotil* selectively lowers the propulsive component of gastrointestinal motility without relaxing intestinal sphincters. So efficient is this action that studies in mice have shown *Lomotil* to be effectively antidiarrheal in one-eleventh the dosage of morphine.

Such striking antidiarrheal activity strongly suggests that *Lomotil* is the drug of *first* choice for prompt and positive control of diarrhea.

Dosage: The recommended initial dosage for adults is two tablets (2.5 mg. each) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is under control. Maintenance dosage may be as low as two tablets daily. *Lomotil* is supplied as unscored, uncoated white tablets of 2.5 mg., each containing 0.025 mg. of atropine sulfate to discourage deliberate overdosage. Recommended dosage schedules should not be exceeded.

An exempt preparation under Federal Narcotic Law.

Descriptive literature and directions for use available in Physicians' Product Brochure No. 81 from G. D. Searle & Co., P.O. Box 5110, Chicago 80, Illinois.

G. D. SEARLE & CO.
CHICAGO 80, ILLINOIS
Research in the Service of Medicine

lar effects were observed despite advanced cor pulmonale in three patients.

DRUG THERAPY NOT EXCLUDED

This emphasis on the mechanical aspects does not exclude drug therapy when an adequate response can be expected. This is true in the prevention of a crisis and in the recovery phase and always for the treatment of an intercurrent or superimposed infection. All the patients received systemic antibiotics and one was treated intensively with penicillin aerosol. Furthermore, drugs must be used when any additional indication is present such as heart failure, prolonged hypotension, and overdosage of narcotics.

In all cases the question of performing a tracheostomy in the recovery phase was given careful consideration. However, since none of the patients required endotracheal intubation for more than 18 hours and since ventilation and evacuation of mucus were well under control at the time of extubation, a tracheostomy was not considered necessary. If there is any doubt, one should not hesitate to use this procedure.

The duration and severity of the underlying pulmonary disease is of importance in determining factors that may have contributed to the development of an obstructive crisis.

A last but most important aspect of prevention is the time factor. In all cases in the series there was a substantial delay ranging from 30 minutes to 24 hours before the ineffectiveness of drug treatment was recognized and more adequate help called for. If the possibility of this catastrophe is sufficiently appreciated, an early diagnosis of drug resistance and the prompt availability of a well-established plan of action should save valuable time.

Letters to the Editor

Ed G. Hopkins, M.D.
120 West Sybert
Nashville, Arkansas

Dr. Alfred Kahn
1300 West Sixth
Little Rock, Arkansas

Dear Dr. Kahn:

I am trying to find an interested physician to take over my husband's, Ed. G. Hopkins, M.D.,

medical practice. We would sell the office with or without the equipment, or lease the office as a practice.

Nashville, Arkansas is a town of 3,500 population with a trade area of around 10,000. There are four other practicing physicians, and a real need for one or two more. Anyone interested could contact Mr. Harold Haller, owner-pharmacist of Pile Drug Store, Mr. Dan Clark, Administrator of Howard County Memorial Hospital, all of Nashville. Any of these could supply the interested person with any information not included in this letter, as regards the volume of Dr. Hopkins practice, the need for another physician in this community, and the set-up of Dr. Hopkins office.

The office building was completed in 1950. It is of native stone, and was remodeled in 1959 to accommodate three examining rooms, an X-ray and/or Ultra-Sound Deep Therapy treatment room, a small sick room with laboratory, lab, storage room, bath, private office, large waiting room and carport. It has central heating and air conditioning.

I would be very interested in talking by phone, or in person to any physician with the personality and physical capacity to handle this very large practice. If interested, I will quote figures of gross and net income, and furnish documentary proof of same.

On appointment I would show any interested physician through the office, and introduce him to the other physicians in the community. I would also show him through our local 50-bed capacity Howard County Memorial Hospital with new plans for an extension, approved at the recent polls.

Thank you for your help in this matter.

Very truly yours,
Mrs. Ed. G. Hopkins, Jr.

ANSWER TO WHAT'S YOUR DIAGNOSIS?

41½-year-old white female

A swelling in the left neck had been noted over a period of one month. There was a past history of a left lower lobectomy for a pulmonary cyst two years previously.

DIAGNOSIS: Cystic hygroma.

X-RAY FEATURES: There is a large rounded soft tissue mass at the base of the left side of the neck. This is a typical location for a cystic hygroma which is a multi-locular thin-walled cyst with an endothelial lining usually filled with clear lymph. It is a retention cyst due to obstruction or lack of development of lymphatic vessels.

THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

October, 1961

Vol. 58 No. 5

FORT SMITH, ARKANSAS

U.C. MEDICAL CENTER LIBRARY

OCT 30 1961

San Francisco, 22

Efficacy of propionyl erythromycin and its lauryl sulfate salt in
803 patients with common bacterial respiratory infections

Tonsillitis*
92.3%
235 patients

Acute Streptococcus Pharyngitis*
88.3%
317 patients

Bronchitis* (Bacterial Complications)
95.3%
85 patients

Pneumonia*
88.6%
166 patients

*References available on request.

The usual dosage for infants and children under twenty-five pounds is 5 mg. per pound every six hours; for children twenty-five to fifty pounds, 125 mg. every six hours. For adults and children over fifty pounds, the usual dosage is 250 mg. every six hours. In more severe or deep-seated infections, these dosages may be doubled.

Available as: Pulvules®—125 and 250 mg. †; Oral Suspension—125 mg. † per 5-cc. teaspoonful; and Drops—5 mg. † per drop.

Product brochure available; write Eli Lilly and Company, Indianapolis 6, Indiana.

Ilosone® (propionyl erythromycin ester lauryl sulfate, Lilly)
†Base equivalent

Ilosone®
works
to speed
recovery

Lilly

132642

IN CERTAIN MENINGEAL INFECTIONS effective cerebrospinal fluid levels— effective antibacterial action **CHLOROMYCETIN**

(chloramphenicol, Parke-Davis)

In the management of certain meningeal infections, CHLOROMYCETIN offers unique advantages. It has been described by one investigator as "...the best chemotherapeutic agent for patients with *H. influenzae* meningitis..."¹ In comparative *in vitro* studies,² CHLOROMYCETIN showed the "highest effectiveness" against *Hemophilus influenzae*, *Diplococcus pneumoniae*, streptococcus, and numerous other pathogens. Another report states: "Chloramphenicol is regularly detected in the cerebrospinal fluid when blood levels greater than 10 micrograms per ml. are reached."³ Blood levels of this magnitude are easily attainable with the administration of CHLOROMYCETIN by either the oral or parenteral routes.

CHLOROMYCETIN effectively penetrates the blood-brain barrier;³⁻⁶ provides effective action against *H. influenzae*^{1-4,7-9} and other invaders of the meninges.^{5,7,10,11} Product forms are available for administration by the intravenous, intramuscular, and oral routes. For these reasons, CHLOROMYCETIN has contributed conspicuously to the dramatic drop in mortality rates in meningeal infections caused by *H. influenzae* and other susceptible microorganisms.

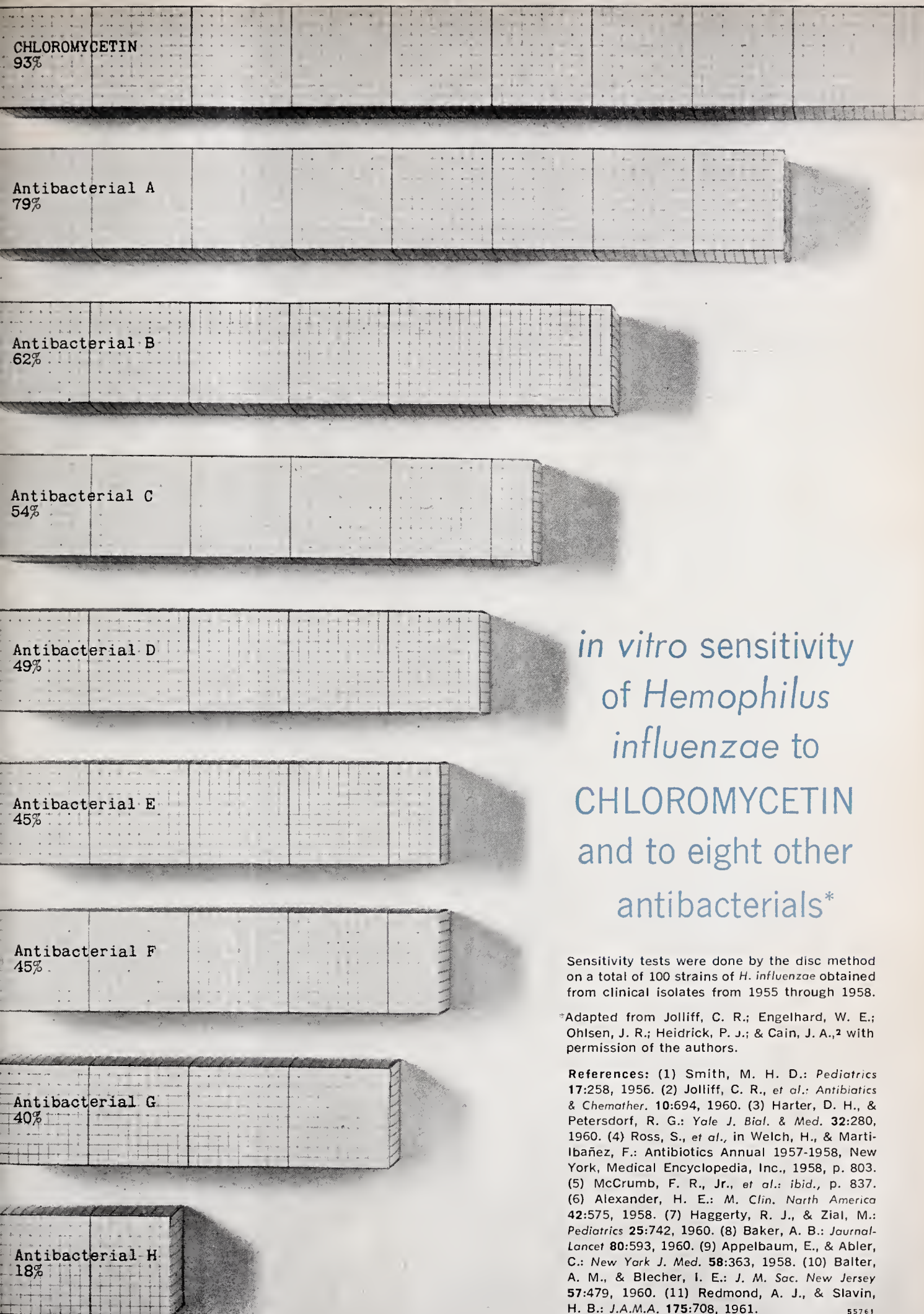
CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals® of 250 mg., in bottles of 16 and 100. See package insert for details of administration and dosage.

Warning: Serious and even fatal blood dyscrasias (aplastic anemia, hypoplastic anemia, thrombocytopenia, granulocytopenia) are known to occur after the administration of chloramphenicol. Blood dyscrasias have occurred after both short-term and prolonged therapy with this drug. Bearing in mind the possibility that such reactions may occur, chloramphenicol should be used only for serious infections caused by organisms which are susceptible to its antibacterial effects. Chloramphenicol should not be used when other less potentially dangerous agents will be effective, or in the treatment of trivial infections such as colds, influenza, or viral infections of the throat, or as a prophylactic agent.

Precautions: It is essential that adequate blood studies be made during treatment with the drug. While blood studies may detect early peripheral blood changes, such as leukopenia or granulocytopenia, before they become irreversible, such studies cannot be relied upon to detect bone marrow depression prior to development of aplastic anemia.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan



in vitro sensitivity
of *Hemophilus*
influenzae to
CHLOROMYCETIN
and to eight other
antibacterials*

Sensitivity tests were done by the disc method on a total of 100 strains of *H. influenzae* obtained from clinical isolates from 1955 through 1958.

*Adapted from Jolliff, C. R.; Engelhard, W. E.; Ohlsen, J. R.; Heidrick, P. J.; & Cain, J. A.,² with permission of the authors.

References: (1) Smith, M. H. D.: *Pediatrics* 17:258, 1956. (2) Jolliff, C. R., et al.: *Antibiotics & Chemother.* 10:694, 1960. (3) Harter, D. H., & Petersdorf, R. G.: *Yale J. Biol. & Med.* 32:280, 1960. (4) Ross, S., et al., in Welch, H., & Marti-Ibañez, F.: *Antibiotics Annual 1957-1958*, New York, Medical Encyclopedia, Inc., 1958, p. 803. (5) McCrumb, F. R., Jr., et al.: *ibid.*, p. 837. (6) Alexander, H. E.: *M. Clin. North America* 42:575, 1958. (7) Haggerty, R. J., & Zial, M.: *Pediatrics* 25:742, 1960. (8) Baker, A. B.: *Journal-Lancet* 80:593, 1960. (9) Appelbaum, E., & Abler, C.: *New York J. Med.* 58:363, 1958. (10) Balter, A. M., & Blecher, I. E.: *J. M. Soc. New Jersey* 57:479, 1960. (11) Redmond, A. J., & Slavin, H. B.: *J.A.M.A.* 175:708, 1961.

THE *Journal* OF THE *Arkansas* *Medical Society*

Owned by
THE ARKANSAS MEDICAL SOCIETY
And Published Under Direction of the Council

ALFRED KAHN, JR., M.D., Editor
1300 West Sixth Street Little Rock, Arkansas
MR. PAUL C. SCHAEFER, Business Manager
218 Kelley Bldg. Fort Smith, Arkansas
LITTLE ROCK BUSINESS OFFICE
114 E. Second St. Little Rock, Arkansas

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY

WM. A. SNODGRASS, JR.—President Little Rock
H. KING WADE, JR., President-Elect Hot Springs
M. E. BLANTON, First Vice-President Jonesboro
CHARLES W. REID, Second Vice-President Pine Bluff
L. E. DREWREY, Third Vice-President Camden
H. ELVIN SHUFFIELD, Secretary Little Rock
W. R. BROOKSHER, Secretary Emeritus Fort Smith
BEN N. SALTZMAN, Treasurer Mountain Home
C. LEWIS HYATT, Speaker, House of Delegates, Monticello
J. P. PRICE, JR., Vice Speaker, House of Delegates Monticello
MR. PAUL C. SCHAEFER, Executive Secretary, P. O. Box 1345 Fort Smith

COUNCILORS

First District	JOE VERSER	Harrisburg
	ELDON FAIRLEY	Osceola
Second District	HUGH R. EDWARDS	Searcy
	PAUL GRAY	Batesville
Third District	K. E. BEATON	Wynne
	FRED B. STONE	Stuttgart
Fourth District	H. W. THOMAS	Dermott
	T. E. TOWNSEND	Pine Bluff
Fifth District	J. L. DEDMAN	Camden
	GEORGE C. BURTON	El Dorado
Sixth District	JOHN P. WOOD	Mena
	KARLTON H. KEMP	Texarkana
Seventh District	MARTIN EISELE	Hot Springs
	J. W. KENNEDY	Arkadelphia
Eighth District	ROBERT D. JONES	Little Rock
	BILL DAVE STEWART	Little Rock
Ninth District	ROSS FOWLER	Harrison
	STANLEY APPLGATE	Springdale
Tenth District	L. A. WHITTAKER	Fort Smith
	C. C. LONG	Ozark

The Advertising policy of this JOURNAL is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

EXCLUSIVE PUBLICATION — Articles are accepted for publication on the condition that they are contributed solely to this JOURNAL.

COPYRIGHT 1961—By The JOURNAL of the Arkansas Medical Society.

NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to the membership.

● SCIENTIFIC ARTICLES

Doctor Citizen 175
Carroll L. Witten, M.D.

Current Concepts in the
Surgical Treatment of
Arteriosclerotic Occlusive
Disease of the Aorta and
Major Arteries 178
Denton A. Cooley, M.D.

Any Body: The Quest for
Cadavers Since the
Beginning of Anatomical
Studies 183
Kenneth G. Jones, M.D.

● WHAT'S NEW

What's New in Obstetrics
and Gynecology 191
Eugene T. Ellison, M.D.

● TEACHING SEMINAR

Hospital Discharge Planning
for the Aged 193
*J. C. Davis, M.D.,
Jeanne W. Yeider, M.S.W.,
Rachael Davenport, R.N.*

● FEATURES

What Is Your Diagnosis 196
Public Health at a Glance 197
Resolution 198
Editorial
Member of Board of
Trustees Writes President-
Elect of AMA A Letter 199
R. B. Robins, M.D.
Medicine in the News 200
Announcements and
Things to Come 207
Obituary 209
Personals and News Items 209
Proceedings of Societies 211
New Members 218
Woman's Auxiliary 219
Book Reviews 219
Tuberculosis Abstracts 219
Correction 222

Notice on Form 3579-P to be sent to Arkansas Medical Society, 218 Kelley Building, Fort Smith, Arkansas. Published monthly under direction of the Council, Arkansas Medical Society Vol. 53, No. 5. Subscriptions \$3.00 a year. Single copies 50 cents. Entered as a second class matter, May 1, 1955, at the post office at Little Rock, Arkansas, under the Act of Congress of March, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 1, 1918. Second-class postage paid at Little Rock, Arkansas.

The JOURNAL

OF THE ARKANSAS MEDICAL SOCIETY

PUBLISHED MONTHLY UNDER DIRECTION OF THE COUNCIL

Volume 58

OCTOBER, 1961

Number 5

Doctor Citizen*

CARROLL L. WITTEN, M.D.**

"If to please the people we offer what we ourselves disapprove, how can we afterward defend our work? Let us raise a standard to which the wise and honest can repair. The event is in the hand of God."

It has been some time since George Washington spoke these words, yet the truth therein rings clear today. It is not of the medical care we offer that I speak, but rather of the community use of ourselves.

On all sides we hear the statement, "Doctors aren't what they used to be." No one will doubt the validity of this statement, however, it is not of medical care the statement was made, but of the doctor himself. For, in general, the public is not critical of the excellent medical care they receive. They are only critical of those from whom they receive it!

If medical care is so good, just what is wrong with medicine today? The answer is obvious. It is you and it is I.

It is not that we aren't good enough doctors. In fact, it may be partially due to the fact that we are so highly trained and skilled in our profession. The reason is simply, that the medical profession has lost its position in the eyes of the public by default.

We are in default by not actively participating in responsible public service—especially in the field of politics. For think what you will—politics is not a dirty word—politics is a public service and those who participate are public servants.

Physicians must accept the fact that politics is necessary—not only in the county medical society—but in public where it

counts! We must not consider politicians as our enemies but should, in fact, adopt the attitude of Abraham Lincoln when he was chastised for making friends of his enemies and told that he should try to destroy them. Lincoln gently replied, "Am I not destroying my enemies, when I make them my friends?"

The truth, sometimes, is difficult to acknowledge. It should be obvious that the American public is increasingly willing to let the Government assume the responsibility for health affairs. Yet, those in medicine are continuously unwilling to participate in governmental affairs to protect the people. Is there little wonder the public doesn't understand us?

The present importance of recently enacted and other impending legislation in Washington, concerning medical care for the aged has headlined two important facts. *One*, the proponents of socialism are out in numbers to force governmental medicine upon our citizens; and *two*, if physicians do not rapidly cultivate a keen interest and an active participation in politics, the socialists will win!

It is not enough to be a good doctor. We must be good citizens. To be a good citizen we must accept the fact that medicine is involved in politics. We are not only in politics, but we must be in it even more. We must have a deep natural and vital interest in politics, for all that political endeavor really is—is widespread community interest that is organized. The doctor must stand up and play an active and indispensable role in his community. This public service role must always be selfless, it must spring from a genuine dedicated and sincere interest in the welfare of the public; entrance into the po-

*Presented at the fall, 1960 meeting of the Arkansas Academy of General Practice in Little Rock.

**2237 Taylorsville Road, Louisville 5, Kentucky

litical arena for promotion of self interest or gain will inevitably fail!

What has happened to medicine? If it is true, as history and memory records it, that at one time the doctor was everything from the father confessor to the wisdom of Solomon, what happened to bring us to the dregs of our present public position. It would appear that the simple truth is—that improvement in communications outstripped the medical profession's ability to communicate. As the rest of the arts and sciences, learned professions and trades gained knowledge, so did medicine. However, medicine became so preoccupied with the accumulation of scientific knowledge and subsequent over specialization that we lost contact with the public. We, in essence, lost the ability to communicate. This is especially true of our medical schools and medical centers today—they have become so enamored of the minutia in medicine that they have lost contact with the public and the practicing profession. They are thereby failing to fulfill their primary purpose which is to produce a sufficient number of well trained physicians capable of and desirous of practicing as family physicians.

As other professions have developed and improved, medicine has withdrawn into a cocoon and relinquished adequate contact with the public. If you don't believe this, look at the regretful scarcity of physicians in cultural, political, and civic activities. For instance, can you personally name five doctors in all of the United States that are politically important—and in a position to be listened to by those who operate our government? Five, I ask, because that is how many doctors signed the Declaration of Independence. Do you think that today out of 56 signers of a public document that five would be doctors? Do you think there would be one doctor? No, we would be flabbergasted if the powers that be saw fit to include even one doctor!

It would seem that there are three reasons for a reluctance of physicians to take their proper role as citizens in political endeavors. These are:

First, *the tendency to over specialization and the subsequent loss of contact with the people.* The validity of this reason is obvious. One need only to look at the record, and God only knows what would

have happened by now if the American Academy of General Practice had not been founded.

Second, *the fear of criticism by our colleagues.* As for this problem, it is high time we stop worrying about what other inactive citizens—regardless of their profession—think about those who do their duty as public servants. Those who work in public affairs must be proof against the shocking insults, mortifying disappointments, and the presumptuous thoughts of the ignorant upon their designs. It is not always popular to do what is best, nor always best to do what is popular!, and

Third, of course, is *the standard excuse of being "too busy."* In regard to this fallacious reasoning, it should be noted that being "too busy" is almost entirely a state of mind. There isn't one among us that couldn't work much harder than we do and still have time to devote to civic affairs. Being "too busy" is an excuse to escape from doing something we do not wish to do, or know how to do. One need only look at the physicians who are performing the most numerous and important services to their communities and invariably they are the busiest and most successful doctors in those localities.

To regain our proper position in the eyes of the public, the medical profession must not only be dedicated to the service of mankind but must actively accept civic responsibilities and participate in governmental decisions. When the medical profession does not participate in all matters of community wide interest, how can we expect the public to accept our ideas on specific recommendations which are obviously for our own benefit?

If we shirk our duties as citizens, if we fail to keep informed of public affairs, if we fail to participate in government, then it is our direct fault that things do not go the way we want them to. The price that we pay for living in a free society is not the financial contribution that we make but the giving of ourselves in civic service as well as in medical service. Voluntary civic effort is the very substance of a democracy and working together has always been a part of the American way of life. This pattern offers the opportunity for each of us to share in community

service, which is not only a democratic obligation but also a democratic privilege. Are we as doctors any different from the rest of the citizens? We should realize that citizenship is a busy two-way street. It carries not only benefits but also responsibilities.

It would behoove every doctor and doctor's wife in the United States to register, to vote, to work at the polls or behind the scenes, to actively participate in political decisions on the ward and precinct level and perhaps, even to run for office. To be effective, the medical profession must have a natural interest in our government and in its operation. As a profession, we had better be taking an active interest for our very future is at stake.

Have you ever stopped to think how really peculiar the medical profession is? We work hard in high school and college, usually are fairly well-rounded students, participating in campus affairs, fraternities, and the like. In general, we have become good all-around student citizens of our community. Then we enter medical

school and get educated—only in medicine—and consequently AWAY from public affairs. It appears that the study of medicine tends to introvert us away from society and we become concerned only with our own medical problems. Have we, by chance, set the standards of our profession too high and our social responsibilities too low? No one would think that we should lower the standards of our profession, but we must raise the degree of our public service participation. For, the public rightfully expects the doctor to assume his civic obligations.

It should be evident that the test of a truly great man or profession is the willingness to serve others. We serve our patients but do we serve the public?

In the past, it is obvious that our profession has failed! We have been good Doctor Citizens—but have we been—good citizen doctors?

Carroll L. Witten, M. D.
2237 Taylorsville Road
Louisville 5, Kentucky

Current Concepts in the Surgical Treatment Of Arteriosclerotic Occlusive Disease Of the Aorta and Major Arteries*

DENTON A. COOLEY, M.D.**

The need for a direct, aggressive approach in the treatment of segmental arteriosclerotic occlusive disease has long been recognized. In recent years extensive clinical experience with such surgical treatment of occlusive lesions of major arteries has provided an effective, satisfactory means of relieving ischemia in tissues distal to the occlusion. Since successful results are dependent on restoration of pulsatile blood flow, this basic therapeutic principle is now widely accepted. With increasing experience it has become more apparent that arteriosclerosis frequently begins and often remains as a localized segmental process and that occlusive lesions have certain sites of predilection with specific clinical patterns or syndromes. Although investigation continues into the surgical treatment of peripheral lesions involving arteries of small caliber, these efforts have not thus far been particularly successful. Thus, surgical treatment of lesions in the anterior descending coronary artery, the middle cerebral, and pedal vessels, has been associated with a relatively high rate of failure. Amenable to definitive surgical treatment are other sites of predilection for occlusive lesions in larger caliber vessels (more than 3 to 5 mm. in diameter—Fig. 1). The present report is concerned with certain aspects of diagnosis and management of occlusions in these particular vessels.

DIAGNOSIS

Only a few fundamental diagnostic techniques and principles are needed to determine the site, nature and extent of an arterial lesion. Frequently, the basic principles of physical diagnosis are overlooked. As an aid in localization of an occlusive lesion, pedal pulses, as well as popliteal, femoral, and abdominal pulses, should be palpated. Auscultation also often proves helpful; frequently a carotid occlusion, a

coarctation of the aorta, or an aorto-iliac occlusion may be demonstrated by means of a bruit in the neck, interscapular area, or abdominal aorta. Oscillometric examination of the extremities, when accompanied by application of basic diagnostic principles and knowledge of the site of the lesion, yields valuable data regarding the degree of vascular insufficiency. Additional information can be obtained by comparison of the blood pressure in the extremities. Therefore, the importance of proper application of the fundamental principles of physical diagnosis in the diagnosis of arterial disease cannot be over-emphasized.

Arteriography is essential for optimal successful treatment of arteriosclerotic occlusive disease, since it is the only method of determining not only the site and extent of the arterial lesion but the status of the circulatory bed distal to the occlusion as well. The latter information is especially important for successful repair, since the run-off system must be adequate to accommodate the new circulatory flow. The usefulness of this diagnostic tool fully justifies the slight risk associated with the technic.

OCCLUSIVE SYNDROMES

The symptoms and signs of arteriosclerotic occlusive disease are fairly constant and often form a recognizable clinical pattern or syndrome. This is to be expected, since such lesions have a predilection for certain sites. Recognition of the circulatory deficiency and its prompt correction are easily attained through knowledge of these syndromes.

Occlusion of Carotid-Subclavian Artery (Aortic Arch Syndromes)

These lesions may occur either at the origin of the main vessels from the aortic arch or at the bifurcation of the innominate artery into the subclavian and carotid arteries (Fig. 1). Clinical manifestations vary according to the site of occlusion as well as the effect upon circulation of the brain, eyes, face and upper extremities. If the occlusion occurs slowly,

*Supported in part by the United States Public Health Service under grants H-3137 and HTS-5387 and by the Houston Heart Association.

*Presented to Arkansas Medical Society, Pine Bluff, Arkansas, April 18, 1960.

**From the Cora and Webb Mading Department of Surgery, Baylor University College of Medicine, Houston, Texas.

aphasia, and syncope or, if the occlusion occurs suddenly, he may experience epilep-

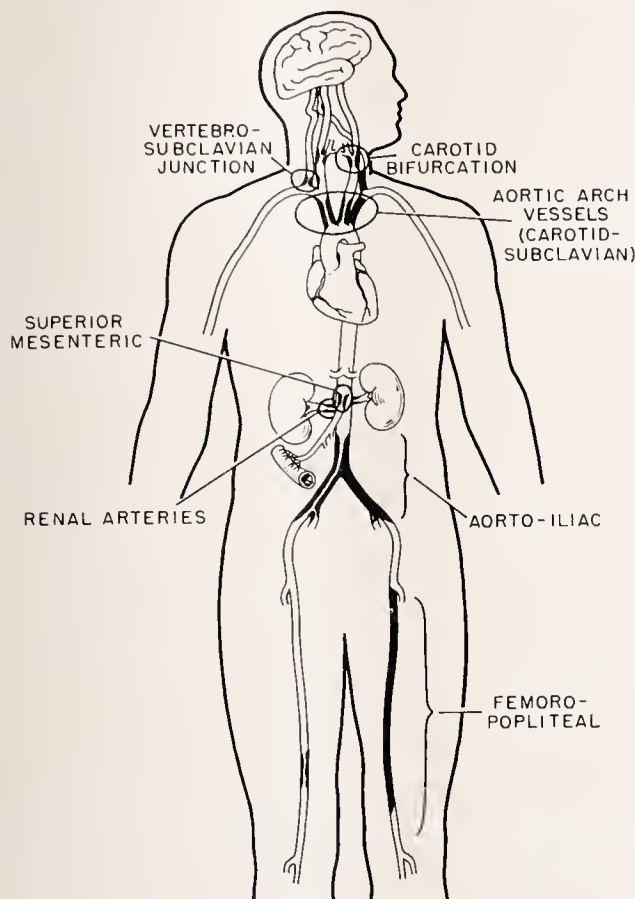


Figure 1

"Current Concepts in the Surgical Treatment of Arteriosclerotic Occlusive Disease of the Aorta and Major Arteries."

the patient may have only mild, transient headache, vertigo, diplopia, hemiparesis, tiform convulsions, complete paralysis, or even death. Ocular disturbances vary from photopsia to blindness. Arterial insufficiency in the upper extremities is usually manifested by weakness, easy fatigability, paresthesia, and claudication, all of which are usually mild. The diagnosis is usually suggested by palpation of pulses in the arms and neck, and the extent of arterial obstruction may also be indicated by comparison of the blood pressures in the upper extremities. On auscultation a bruit may be detected.

Carotid Bifurcation Disease

In a large series of patients, 90 per cent were found to have cerebrovascular strokes due to acute or chronic occlusive disease. From 20 to 50 per cent of such lesions responsible for stroke occur near the origin of the internal carotid artery in the neck. Manifestations, which vary

according to the rapidity with which the lesion progresses, include exacerbations and remissions of hemiparesis, aphasia, mental confusion, and transient blindness. Unilateral numbness and weakness on the contralateral side with monocular blindness almost definitely signify carotid insufficiency. The carotid pulsation in the neck or pharynx is sometimes diminished, and the arterial pressure in the retina may be reduced. The presence of the lesion may be suggested by a bruit, which can be heard by the patient as well as the physician. Complete thrombotic occlusion of the internal carotid artery or its branches is characterized by occurrence of a sudden, full-blown stroke. Complete clinical recovery in such patients requires emergency operation after carotid arteriography. Since 60 to 80 per cent of patients with sudden occlusion of the internal carotid artery have some premonitory minor neurologic episode or "little stroke," aggressive surgical treatment of the occlusive lesion in the cervical portion of the internal carotid arteries would seem advisable before symptoms become more severe and the final catastrophe occurs. The segmental occlusive lesions and the intracranial circulation are demonstrable on carotid arteriography performed under a local anesthetic.

Occlusions of Vertebral-Basilar Artery

The symptoms and signs of basilar artery insufficiency produce a syndrome which comprises visual (cortical), cerebellar, cranial nerve, and bilateral motor and sensory disturbances. Occlusion of the vertebral and basilar arteries is manifested by rotational vertigo, disturbances in equilibrium, diplopia, bilateral blindness or hemianopsia and bilateral impairment of sensory and motor function. The patient may complain of facial numbness, tingling, and pain and of ataxia or poor muscular coordination. Physical examination is usually not sufficient to determine the site of the lesion, as the right and left arteries join at the brain stem to form the basilar artery. Accurate diagnosis, thus, requires vertebral arteriography by the trans-subclavian route under a local anesthetic.

Occlusion of Renal Artery

Since Goldblatt elucidated the association of occlusion of the renal artery and

hypertension in 1934, extensive investigation has been conducted in the pathogenesis of renovascular hypertension. Recently the selection of patients with renovascular hypertension for surgical treatment has been significantly improved by aortography. This diagnostic technic cannot, of course, be used in all patients with essential hypertension, but several diagnostic clues are helpful in screening renovascular lesions in hypertensive patients.

Renal arterial stenosis in a hypertensive patient may be suggested by a history of recent, sudden appearance of hypertension or sudden increased hypertension in an already hypertensive patient, rise in blood pressure after injury or illness or sudden hypertension in a patient in the arteriosclerotic age group (40 to 60 years).

Abnormal excretory pyelograms are found in about half of the patients with unilateral stenosis of the renal artery, and suspicion should be aroused whenever renal function is poor. Unilateral reduction in renal flow may be demonstrated by differential renograms made with radioactive Diodrast. Split renal function tests may reveal a reduced glomerular filtration rate, relative oliguria, and reduced sodium excretion on the affected side, but this test is too complex for routine purposes. Aortography alone accurately demonstrates the stenosis and must therefore be used more frequently in the future for diagnosis of renovascular hypertension.

Blood pressure returns to normal after arterial restoration in about 80 per cent of patients with renal arterial occlusion. Some improvement or more favorable response to antihypertensive drugs is usually noted postoperatively in the remaining patients.

Occlusion of Superior Mesenteric And Celiac Arteries

Among common symptoms of incomplete occlusion of the superior mesenteric artery are postprandial abdominal cramps, which result from gastrointestinal ischemia and which are referred to as intestinal or abdominal angina. Defective absorption from the intestinal tract often develops, resulting in a sprue-like syndrome with large semisolid and sometimes liquid stools. Other patients complain of constipation and sluggish intesti-

nal mobility. The clinical history, the presence of a bruit in the epigastrium, and demonstration of undigested food in the stools often arouse suspicion but diagnosis is established only by abdominal aortography made with the patient in the lateral position. Early diagnosis of the occlusive lesion with operation before the obstruction becomes complete is essential to preclude gangrene of the mesenteric organs from complete or sudden thrombosis of the superior mesenteric artery and even death.

Aorto-Iliac Lesions

Among the most common arteriosclerotic lesions which require operation are occlusions of the terminal abdominal aorta and iliac vessels. Results of surgical intervention have, fortunately, been exceptionally good. Intermittent claudication in the lower extremities is characteristic, with calf pain on walking in most patients. Most commonly, however, the thighs, gluteal muscles, and hips are involved. The lumbar muscles may also become painful on walking when the occlusion of the abdominal aorta is high. Pelvic symptoms caused by diminished flow through the internal iliac arteries, are common in both sexes, but especially in men, in whom it causes sexual impotency. Pulsation in the femoral arteries at the groin is absent, although a faintly palpable femoral pulse may be noted in the presence of an incomplete occlusion or an extensive collateral network. Auscultation should be carried out routinely in these patients, since a systolic murmur or bruit may be heard over the abdominal aorta or femoral arteries at the groin. Oscillometric examination of the lower extremities may be helpful but translumbar aortography carried out under a general anesthesia is the single most important diagnostic test. It provides accurate localization of the occlusive lesion and is associated with a low risk. Except when gangrene of the lower extremity is extensive, patent distal circulation is present. Clinical recognition of these particular cases is especially important because of the high percentage (90 per cent) of good results after operation.

Femoro-Popliteal Lesions

Hunter's adductor canal is a site of predilection for arterial occlusions distal to the inguinal ligament. In these lesions

claudication, confined to the calf, characteristically occurs after the patient has walked fifty to one hundred yards. Frequently, atrophic changes with ulceration and gangrene take place in the feet as the result of limited collateral blood supply. Occlusions of the femoral artery in the thigh may either remain localized for long periods or may progress rapidly. Since successful surgical results depend largely on the nature and extent of the occlusion in the popliteal and tibial vessels, femoral arteriography performed under a local anesthetic is of benefit in these patients. A bypass graft or endarterectomy with patch graft angioplasty should prove successful when adequate popliteal-tibial "run-off" is available.

SURGICAL TECHNIQS

The technic of arterial repair should be selected according to the specific features of the lesion. The wide use of arterial graft replacement has resulted in rapid advancement in this field. Synthetic prostheses almost exclusively have replaced

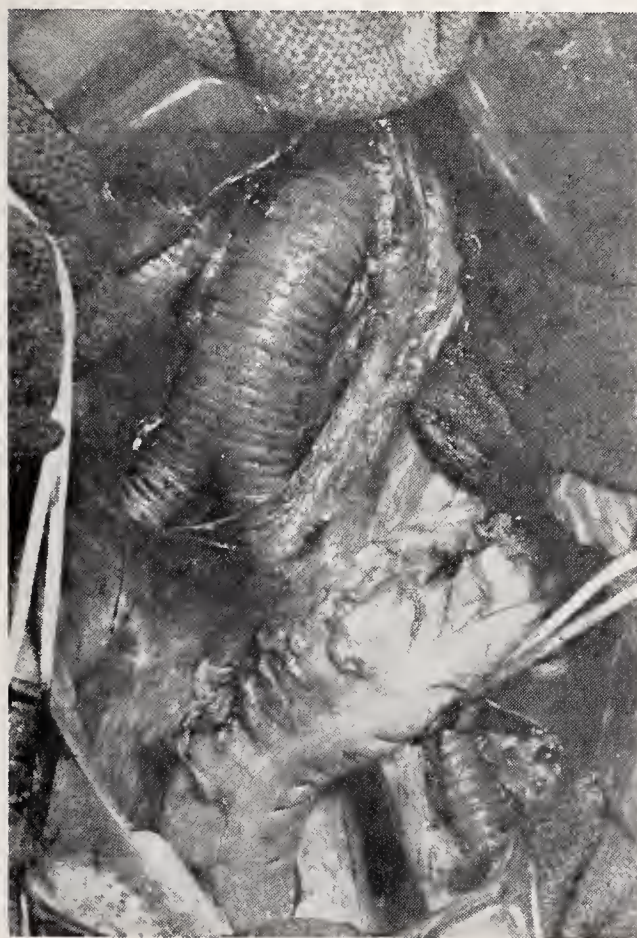


Figure 2

"Current Concepts in the Surgical Treatment of Arteriosclerotic Occlusive Disease of the Aorta and Major Arteries."

arterial homografts and venous autografts in treatment of occlusive arterial lesions. Most satisfactory of all such prostheses has been a knitted dacron graft with crimping to prevent "kinking" (Fig. 2). Impregnation of the graft with blood before use controls bleeding through the interstices. Firm healing and development of an adherent, smooth internal lining inside the graft are insured by tissue growth into the graft. Patients have had these prostheses implanted for more than four years without difficulty. The fact that better results can usually be anticipated in larger caliber vessels than in small vessels would suggest that subsequent thrombosis is prevented by the rapidity of arterial flow.

Atherosclerotic occlusive lesions may be repaired by various procedures, depending on the preference of the surgeon: endarterectomy with patch graft, endarterectomy, arterial excision with graft replacement, graft bypass, and various combinations of these technics (Fig. 3). In small caliber arteries patch graft angioplasty is frequently used; a longitudinal arteriotomy for endarterectomy is used but is not closed directly to prevent formation of stricture. The area of the arteriotomy is widened instead by suturing a patch of knitted dacron into the opening, and subsequent occlusion is avoided.

Endarterectomy with patch graft angioplasty is preferred in repair of carotid arterial occlusions and a similar procedure is used for subclaviovertebral occlusions. Renovascular occlusions and localized occlusions of femoral and popliteal vessels may also be satisfactorily corrected by this method or by the bypass technic. Aortic arch lesions, aorto-iliac occlusions, celiac and mesenteric occlusions, and extensive segmental occlusions in the superficial femoral artery are treated preferably by the bypass technic with the use of a dacron prosthesis. Excision combined with bypass graft may be needed in the presence of combined aneurysmal and occlusive lesions, as frequently in the case of aortic, iliac, and femoral arterial disease. Peripheral thrombosis can be prevented while a major vessel is occluded by injection of 10 to 20 mg. of heparin into the distal artery during the operation. Anti-coagulants are rarely needed postoperatively and may cause serious complications

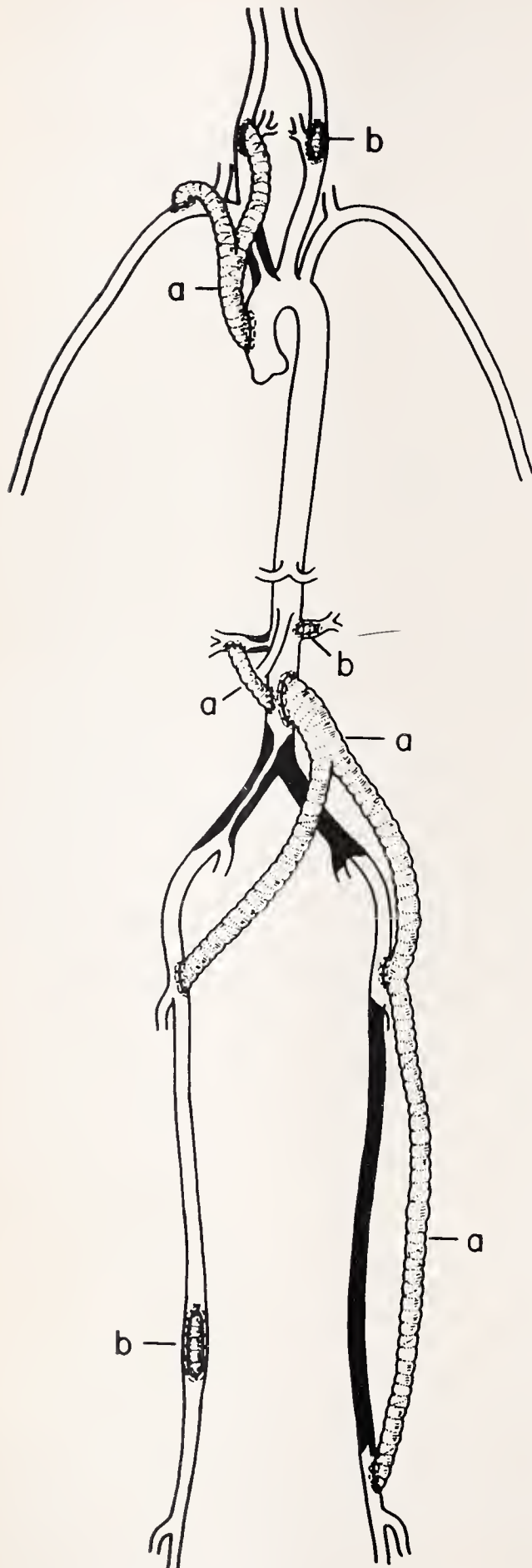


Figure 3

"Current Concepts in the Surgical Treatment of Arteriosclerotic Occlusive Disease of the Aorta and Major Arteries."

because of threat of hemorrhage in extensive arterial procedures.

Sympathectomy alone is known today not to relieve symptoms of intermittent claudication, but it may encourage healing of recently formed cutaneous lesions produced by ischemia. It still serves a useful purpose in surgical therapy, especially in diffuse peripheral occlusive disease and whenever grafting of vessels is not possible. Peripheral flow is often enhanced when lumbar sympathectomy is performed concomitantly with femoropopliteal and aorto-iliac occlusions. Lumbar sympathectomy is not, however, advocated indiscriminately, because postsympathectomy neuralgia occasionally leads to extremely disabling symptoms. The incidence of such a syndrome is very low, fortunately, and should not prevent use of the procedure when properly indicated.

SUMMARY

Direct surgical treatment of segmental arteriosclerotic occlusive disease provides optimum results in regard to relief of symptoms and control of ischemic lesions in the distal tissues. Certain sites of predilection for occlusive lesions are now well recognized, and patterns of clinical findings should become familiar to all physicians. This presentation has been concerned with a consideration of diagnostic and therapeutic aspects of common occlusive arterial lesions which may respond favorably to direct surgical attack.

LEGENDS

Fig. 1. Drawing showing sites of predilection for segmental arteriosclerotic occlusive lesions which are currently of surgical significance. Direct surgical attack on these lesions will provide effective control of the symptoms and ischemia in distal tissues.

Fig. 2. Photograph made at operation for aorto-iliac occlusive disease showing crimped dacron bifurcation prosthesis used as a bypass from the abdominal aorta to external iliac arteries bilaterally.

Fig. 3. Composite drawing of arterial system demonstrating some of the techniques of arterial reconstruction currently in use. These include (a.) bypass, and (b.) endarterectomy with patch graft arterioplasty.

Any Body: The Quest for Cadavers Since The Beginning of Anatomical Studies

KENNETH G. JONES, M.D.*

The physician and surgeon, like any skilled mechanic, must have more than a casual knowledge of the object of his endeavors. It is essential that he learn in detail the structure of all the parts. He is obliged to know their location, size, shape, and the relationship of one to another as well as their function. Anatomy is truly the foundation of medicine. Notwithstanding the comprehensive anatomical texts with graphic illustrations now available, the cadaver still provides the student the most impressive, and consequently the most retentive, source of knowledge of this subject.

At no time has there been a plethora of material available for dissection. In the United States today, schools often experience difficulty obtaining cadavers in sufficient numbers. Even so material for this work is rarely recruited from the living. Most schools are able to provide students with an adequate number of bodies without the assistance of resurrections or resorting to "burking." Also, fortunately, the twentieth century anatomist is not often tethered by laws, customs, and religious prejudices which make dissection of the human body impossible. But public understanding is not easily obtained. For many years, anatomists were forced to pursue their studies outside the law. To acquire cadavers they had to engage in a lawless traffic of dead bodies, and to study these illegal specimens secret dissections were often necessary.

When and where the first anatomical dissections were performed may never be conclusively established, however, the first anatomical observations we have are those recorded by Alcmaeon, a physician who lived in the Greek province of Crotona about 600 B.C. It is reasonably certain that these investigations were carried out on animals and that this ancient did not dissect the human body. While Alcmaeon's work is the first irrefutable evidence of anatomy having been investigated as a science, reliefs and figures that

antedate the birth of Christ by a thousand years or more have been uncovered in Egypt, Syria, and on the island of Crete which by their accurate representation of the human form suggest the sculptors had more than a topical knowledge of anatomy.

Whether or not the father of medicine, Hippocrates (460-circa 359 B.C.), or his contemporaries anatomized mortals is impossible to ascertain unequivocally. These wonderful Athenians, who came of age during the reign of Pericles, have left us a vast number of scientific works covering many phases of medicine, but among these writings, conclusive evidence that dissection of man was practiced is lacking. It is known, however, that they were acquainted with the anatomy of the bones, and that on occasions the body cavities were opened to determine the cause of death, but the study of human anatomy in detail does not appear to have been carried out. To assume that if these early investigators had conducted studies of this nature, they would have endowed us with descriptions similar to those left by them dealing with other phases of the healing art is not unreasonable. Such records could have been lost, of course, but it is more likely that their anatomical studies were, as Alcmaeon's, restricted to animals.

Aristotle (348-322 B.C.) of Macedonia, the greatest intellect of Plato's school, was student or master of all the sciences known to the Athenians of his day including Anatomy. Nevertheless, his anatomical studies were also comparative. It is reasonably certain that he did not dissect the human form. Even so, much was accomplished by this genius. His descriptions of the lower animals provide a solid foundation on which the classical anatomist who came later build our modern texts. Also, to him must be given credit for introducing illustrations into the basic science. His were the first anatomical drawings.

Though his contributions are immeasurable, his work was not without error. It seems strange that he attached so little

*Jones-Murphy Orthopedic Clinic, 4300 West Markham, Little Rock, Arkansas

significance to the brain. It was his belief that the heart was the center of intelligence while the brain was merely a colling system for that organ. This opinion is antithetical to that held by the anatomists who preceded and followed him. Subsequent investigations have proven that the heart is not the center of intellect and that the brain does not give off heat, although some scholars still question whether or not the brain of man is capable of thought.

With the death of his pupil and benefactor, Alexander the Great, in 323 B.C., Aristotle quit Athens. For Athens, these were fatal blows: the first in a long series of events which forced her to yield the torch of education. From there, the center of learning moved to the magnificent city of the Nile that was founded by the great warrior who bequeathed her his name. In Alexandria, the Athenian spark of learning was fanned to a bright flame. Under the patronage of the Ptolomies, such men as Euclid the geometer; Archimedes, the philosopher and physicist; Strabo, the geographer; and Aristophanes, the rhetorician; adjourned at will. It was in this atmosphere that Herophilus (circa 300 B.C.) the father of anatomy, and Erasistratus began the scientific dissection of mortal anthropoids. It is reliably established that their work was conducted on human beings. These were the first legalized dissections.

The Ptolomies were generous with their erudite proteges. Bodies were provided in an adequate number by proclamation. And, if we care to believe Celsus, on occasions condemned criminals were delivered to these anatomists for punishment by vivisections. It is possible that, as in Germany under Hitler, those considered by the authorities were disposed of by the process of experimentation. The study of anatomy on the human cadaver was continued in the city of its birth until about 100 A.D. when, under the Romans, it seems to have been discontinued. But, during this brief period, much progress had been made.

With Galen (circa 130-200 A.D.), who is often referred to as the Prince of Physicians, the Alexandrian period of Anatomy came to a close. This great interrogator of nature was a native of Asia, a

student of Alexandria, and practitioner of Rome where he served Marcus Aurelius, the stoic philosopher and ruler. While there are indications in his writings that he was aware of differences between his animal dissections and man, for the most part his work was conducted on the Barbary ape. Often he encouraged his students to leave Rome and go to Alexandria so that they might examine a human cadaver.

Galen, like Aristotle, was also a philosopher. It was his belief that he could discern the function of each part of the body and then by logic show how this part was perfectly constructed for its function and consequently could not be constructed otherwise. Such a belief admits a knowledge of all things both physical and spiritual. Galen readily admitted omniscience. His writings were so dogmatic and convincing that for hundreds of years his teachings were followed blindly. Decades were lost while men believed that beyond Galen no progress could be made. His was thought to be the final word. Unfortunately, while he contributed much to anatomy, especially the study of the muscles, such a blind faith, as so often is the case, was not to man's advantage. Progress was retarded. The millennium that followed was an intellectual void.

The Dark Ages (300-1300 A.D.) that came after Galen clung to man like a death, during which anatomy and almost all other forms of learning were dormant. The growth of Man's recently acquired infant, Science, was stunted by little minds. This intellectual decay began in Rome about the beginning of the third century A.D. and spread like a malignant growth throughout the once glorious empire. The mind of Man slept.

During those lost years, Anatomy rested among the writings of the Arabians. Its return to the Western World was begun at the monastery of Monte Cassino in southern Italy about 1050 A.D. Here the laborious task of translating the works from Arabic into Latin was initiated. Salernum, where a few rays of enlightenment had resisted extinction, also contributed to this re-birth of knowledge. There at the University, the first medical diplomas were awarded to candidates who had completed prescribed studies. In 1231

A.D., Frederick II (1194-1250) decreed that a cadaver would be anatomized in that city once in every five years and that the physicians of the realm were required to be present; but there is no record that this order was ever executed. During the thirteenth and fourteenth century, dissections of man was legalized in Montpelier, Venice, Naples, Spain, and Germany, but the revival of anatomy took place in Bologna under Mondino (1270-1326) who has since become known as the "Restorer of Anatomy."

In Bologna, in 1315, Mondino, with legal consent, publicly anatomized a human female corpse. This was the first public dissection we have record of for many years. Perhaps the greatest contribution made by this man, who was the first of the modern anatomists, was that he descended from the professor's chair to conduct the dissections himself. Prior to him, most of the manual work had been done by the barber-surgeons while the professor lectured from a high chair, overlooking the occupied slab. A year after this early dissection, he wrote his "anathomia," the first of what may be called modern anatomical text.

Even in those days, subjects for dissection were difficult to obtain. Criminals who had been sentenced to capital punishment were often executed in a manner prescribed by the anatomists so that their bodies might be used for study. Later, in England, the inadequacy of this form of procurement gave rise to graverobbing and murder. Not only did the student find it difficult to obtain material, but, once obtained, it was necessary to proceed rapidly with the dissection before putrefaction had become advanced. Why embalming preceding dissection was not resorted to is not apparent. Certainly the art was known before this period. While embalming seems not to have been used, solar drying prior to examination and maceration of the flesh and muscles so that the nerves might be traced was practiced.

Mondino was followed by anatomists of little importance, but during the next two hundred years, naturalism came to the front among the artists, and such great painters as Michaelangelo (1475-1564), Raphael (1483-1521) and Leonardo de

Vinci (1452-1519) are known to have carried out dissections. The latter artist, in conjunction with an anatomy professor at the University of Pavia, began an anatomical text which was never completed because of the death of the anatomist, but judging from the drawings available, one can be sure that if this wonderful work had been published during de Vinci's lifetime, he, instead of Versalius, would now be known as the reformer of anatomy.

By the early part of the sixteenth century, Paris had become the center of medical education . . . an honor short-lived. A former Parisian student, Andreas Versalius, in 1543 with the publication of the two greatest anatomical works the world had yet seen, made the University of Padua in northern Italy the center of medical science. At Padua, Versalius occupied the chair of anatomy which was created for him shortly after he had received his medical degree. This was the first full professorship in Anatomy.

His two great works, the *Epitome* and the *Fabrica*, were revolutionary. For their author, they have earned the title of the "Reformer of Anatomy." To this great Belgian, who could articulate a skeleton blindfolded, must be given the credit of proving the dogmatic teachings of Galen were not infallible. These two books were the anatomical texts for physicians and artists for the next two hundred years. In fact, even today it is maintained by some authorities that the drawings, which might have been done by Jan Stephan Van Calcar, cannot be surpassed. Since it was a publication, the *Fabrica*, greater of the two contributions, has passed through twenty-five or more editions.

When one considers the scarcity of anatomical material available to this author, the results seem even more remarkable. The work on the female reproductive system, while not perfect, is essentially correct and is believed to have been derived from the dissection of only six bodies. Dissection had been legalized in northern Italy, but the only source of material provided by law was the executed criminal. Had the authorities been more careful about checking the disposition of the corpses of paupers who died without relatives, it is likely that these great works could not have been written. How many

stolen bodies contributed to their compilation, we can only speculate.

From Padua, medical achievement moved to Leyden, Holland, where it resided until the latter half of the eighteenth century when it migrated across the channel to Edinburgh, Scotland. The University of Edinburgh had received its charter in 1505, but nothing outstanding was accomplished until after Monro I was appointed Professor of Anatomy in 1720. Following this, the school gradually assumed the leadership in healing art which it maintained for years. Monro I was followed by his son, Monro II, who in time passed the title to his own son, Monro III. The first two Monro's were men of accomplishment, but the third was not competent for the position he inherited. Dissatisfaction with his lectures and demonstrations became so prevalent among the undergraduates of the University that private anatomical schools came into existence in Edinburgh to meet the demand of the students for better instruction. In turn, these private schools created an increased demand for cadavers.

As in many other nations, dissections had been legalized, but the law had failed to provide bodies in adequate numbers. The condemned malefactor remained the sole source of anatomical material on which the University had first call. Therefore, the private anatomist was forced to resort to stealth to obtain cadavers. Anatomists had been dealing with grave robbers since the very early days of the science, but their demands had not been large. Now, with the new schools springing up, the demand was so great that for those with talent for this work, a lucrative profession was created. The ignominious men who dealt in purloined corpses became known by the noble title "Resurrectionists." Their members were assembled from the foulest culprits, yet because of the passivity of the government, their infamous trade was sustained by law, or the absence thereof. If the Anatomy Act of 1832, which had long been sought by the Medical Profession, had been enacted earlier, England and Scotland would have been spared many odious crimes.

The ghoul who deserves the questionable honor of being remembered as the first resurrectionist neglected to record

his name for posterity . . . an oversight that may have been intentional. But, in the beginning, no one could have foreseen the international reputation these unusual thieves would acquire. Their profession, which came into existence about the middle of the eighteenth century and attained maturity during the first thirty years of the nineteenth century, was almost singular to the United Kingdom. In no other nation has the delicate art of graverobbing and body-snatching been developed to such perfection. Whether this craft had its beginning in London, Dublin, Edinburgh, or Glasgow, is not known, but during the reign of the "sack-'em up men" each of these cities contributed to the development of the art.

Until 1745, when the monopoly on cadavers, held by "The United Company of Barbers and Surgeons," was liquidated, there was little demand for the talents of the resurrection men. Material supplied by the hangman was, for the most part, sufficient. This company had come into existence in 1540 when Henry VIII had united the London Barber Surgeon, whose charter dated from 1461, with the Fellowship of Surgeons and gave them the sole right to dissection. Prior to 1745, there were a few demonstrators who taught anatomy in spite of the illegality of this form of instruction. Their demands for material was usually met by their own cunning or that of their students who often strolled outside the law in order to enhance their learning. Later, when the demands for bodies increased, men of medicine relinquished this undesirable avocation to those more suited to the calling. For the latter, snatching bodies became a pursuit whose object was financial gain.

The extent of the financial remuneration those men were able to obtain from their nefarious traffic depended upon many things. It is believed that some of these culprits were able to realize as much as a thousand dollars during the season for their efforts. The anatomical season was concurrent with the academic year in the medial institutions, extending from October to the following May. It was during these months that the culprits who made resurrection their business were active. Such things as the corpse's identity, age, sex, state of preservation, and wheth-

er or not that particular specimen was a highly sought after anatomical freak all had a bearing on the extent of the culprit's reward.

The theft of the mortal remains of the Irish giant O'Brien by John Hunter, is an example of the latter. The giant who was two inches short of eight and a half feet, died in 1783 after a long illness. Shortly before his death, the Irishman learned that his skeleton was greatly coveted by Hunter who wished to add it to the collection which has subsequently become known as the Hunterian Museum and which now resides in the Royal College of Surgeons in London. O'Brien, who had a natural aversion to being dead in the first place, found such adoration objectionable. It was his wish that he be buried at sea in a lead coffin toward which end he made arrangements. However, Hunter, by cunning and several hundred dollars was able to satiate the avaricious loyalty of the hired guardians and to make off with the prize. The body was taken to London where the flesh was removed and the skeleton articulated. Today, the giant's bones hang in the Royal College of Surgeons—a priceless specimen.

The body-snatchers were always alert for business. If one of these ghouls happened to be in the neighborhood when an unexpected or accidental death occurred on the street, he would rush up claiming to be a relative of the deceased and demand the body, which instead of being interred in the local cemetery found its way to an anatomist's dissecting table. Another source of bodies for these unsavory tradesmen was the workhouse or charity institutions. Oftentimes when a death occurred there a resurrectionist or his paramour would appear claiming to be the legal custodian of the body thereupon removing it for alleged burial. So brazen were these gentlemen that hanged criminals, who by law should have been delivered to the Royal College of Surgeons for dissection, were stolen from the gallows and presented to the anatomists as fair merchandise. Usually, the price was paid. Still another source of material was the dishonest undertaker who buried a weighted coffin and sold the body on the black market. Occasionally, to the delight of the suspect, bodies being held for in-

quest were missing by the time the proceedings were initiated. They, too, were eligible specimens.

The demands of the schools in Edinburgh, Glasgow, and London were great enough at the beginning of the academic year to put quite a strain on the local merchants. To meet this demand, an export trade from northern Ireland was organized. Until its discovery in 1827, this proved to be an affluent source of material for the anatomical teachers of the United Kingdom. Perhaps the audaciousness of the scheme was the reason it survived so long undetected.

Nevertheless, the most consistent source of material for the sack-'em up men was the burial ground. The cunning which these gentlemen exercised in exhuming their quarry is astounding. As a rule, they worked in gangs of six to eight usually one of which was the sextant or custodian of the field. In the great cities, the early hours of the evening were the preferred time for their activities in order that the watchman might be avoided; while in the rural areas, graverobbing usually took place after the living inhabitants had retired. The soft earth covering the recently buried coffin was removed by the team digging continuously in relays with wooden shovels so that noise made by metal tools striking rock could be prevented. By this means, the coffin was reached and a hole opened in one end in a matter of minutes, through which the body was dragged. The earth which had been thrown out on a large canvas was rapidly replaced and the mound shaped as before. The body was sacked and carted away. A single gang operating in this fashion have been known to uncover more than a dozen corpses in one evening. When one considers that the average price for a good cadaver was about twenty dollars—money, in those days—one can readily appreciate the motive of these assistants of science.

Mankind has always sought a means of defending himself against aggression, and so it was on this occasion. Bereaved relatives who had no desire to advance science, erected great iron cages, or Mort-safes, over the graves of their deceased. Still later, iron coffins, designed to withstand the onslaught of resurrectionists,

were marketed. Some cemeteries erected houses where the remains were kept until sufficiently decomposed to make them useless as anatomical specimens. But these defenses were not adequate to seriously impair the lucrative trade.

Among these thieves, there was no honor. As would be expected, the theft of bodies was not the only depraved act of those dealers in flesh. As trade grew and competition became keener, conflicts between the various gangs was an inevitable sequel. Oftentimes, one clan found its vocational efforts thwarted by the appearance of another group of thieves. Violence would ensue, and occasionally, one of the felons, after laying down his life for his art, would be substituted for the coveted prize. On other occasions, the robbers ran afoul of friends or relatives of the deceased whose object it was to guard the grave until sufficient time had elapsed to make the corpse undesirable for anatomical study. Gun battles between the guardians and the resurrectionists are known to have taken place, but since this attracted the attention of the surrounding community and seldom netted the thieves the body, these engagements were not frequent. The sackers, as a rule, preferred to wait out the relatives and then make off with the body.

These sinister merchants not only ran afoul of the law, each other, and relatives of the deceased, but also with their benefactors, the anatomists. The private anatomists had no choice except to deal with these men as there was no other source of supply until the Anatomy Act of 1832 was enacted. Excepting those choice specimens that he or his students were able to obtain by stealth, which were of insufficient numbers, the teacher was forced to depend entirely upon the resurrectionists. Like the American prohibition mobsters, each gang insisted that they have an exclusive right to the purchaser's business. Also, the association which the anatomist had with the sack-'em up men was used as grounds for extortion. The impossible position of the anatomist often resulted in acts of violence against him or his property by paranoid members of the clan. Nor was that all. The anatomist was expected to support the family of the criminal while he was confined for his

heinous acts and to pay the culprit a stipend for each week of incarceration. It is not difficult to understand why the anatomist wanted reform and why the resurrectionists were well satisfied with the laws that existed. Later, this public confusion was crystallized by the odious murders which took place in Edinburgh and London into a demand for reform, and Parliament's apathy was forced to give way.

The name of William Burke and William Hare occupy an unique place in anatomical history. They were neither scientists nor resurrectionists. To aid humanity was no doubt the farthest thought from their minds, but like bloody wars, they were instruments through which improvement was initiated. These two men were perhaps the most revolting criminals in Scotland's entire history. Their crimes agitated the growing reaction for improvement which was precipitated a few years later as the Warburton Anatomy Act by a similar atrocity in London.

The murders committed by these degenerates and their female confreres, Mrs. Hare and Helen McDougal, began in December, 1827, and extended over a period of almost one year. Fittingly, their villainous careers were ended on October 31, 1828. During this brief period, they are believed to have murdered, by suffocation or some equally suitable manner, up to sixteen persons to sell to the anatomists. Their victims were drafted from the old and infirm that roamed the streets of Edinburgh. These unfortunates were enticed to the assassins' rooms under a guise of friendship where they were done in. Even though the value of anatomical material had increased since the early days of the resurrectionists, it was far from sufficient to justify such selfish acts. Probably, Burke and Hare received only about thirty-five dollars per body.

The careers of these criminals ended soon after the murder of an old woman named Docherty. The body of the victim while in transit was seen in the home of the murderers by a Mr. and Mrs. Gray, who reported the incident to the police. As investigation was instituted which led to the dissecting room of one of Edinburgh's most famous anatomists, Dr. Robert Knox, where the body was found in a

bound trunk having so recently arrived at the institution that it had not been opened.

Burke and Hare with their female accomplices were brought to trial on December 24, 1828. The women were admonished and released for lack of evidence. Hare had turned King's evidence, in return for which he was not prosecuted. Burke was found guilty as charged and hanged Wednesday morning, January 2, 1829, before a delighted crowd estimated to be between twenty and thirty thousand. In compliance with the sentence of the court, Dr. Monro III, who was then Professor of Anatomy at the University of Edinburgh, on the following day publicly dissected the body of the criminal. Because of the popular demand, it was necessary to permit the public to view the corpse after it had been anatomized. The skeleton of Burke now hangs in the Museum of Anatomy at the University of Edinburgh, and to the English language has been added the transitive verb "to burke," which is defined by Webster as "1. To murder by suffocation, or with few marks of violence, in order to obtain a body to be sold for dissection. 2. To dispose of quietly, as by suppressing or shelving."

Hare, under legal protection, was transported to London where he was cast into a vat of lime by workmen who learned his identity. As a result of this treatment, he was blinded, and the last decades of his life were spent as a beggar in London. After many difficulties, Mrs. Hare and Helen McDougal were removed from the country. Their subsequent fates are uncertain.

Although Burke's confession exonerated Dr. Knox, as did the report of a committee which was later appointed to determine the anatomist's guilt, his career was ended. Had the masses prevailed, Knox would have been hanged along with the three participants who escaped legal punishment. Within a few years, the professor who once attracted the greatest attendance in Edinburgh had only a few students, and his practice was almost nonexistent. Shortly thereafter, he moved to London where he died a disillusioned man.

As heinous as these crimes were, they were not sufficient to bestir Parliament into enacting legislation that would do

away with circumstances which induced such activities. These lethargic Lords could not be moved until a crime of similar nature was perpetrated in London almost on the steps of Parliament. First, the names of Bishop, Williams, and May had to be added to the criminal files.

These men, accompanied by a fourth named Shields, in early November, 1831, presented for sale at King's College the body of a young boy. A cursory examination of the remains suggested foul play, and the peddlers were arrested. A post-mortem examination of the body revealed that the boy's death was due to his neck having been fractured. These monsters were arraigned for murder the following month. All except Shields were sentenced to death by hanging; the latter being acquitted because it was not proven that he was connected with the murder. May's sentence was later commuted to life imprisonment. Bishop and Williams were executed on December 5, 1831, and their bodies subsequently dissected. At last, the British Government was moved. On August 1, 1832, the Warburton Anatomy Act, which provided for legal pursuit of anatomy and an adequate source of material in unclaimed bodies, became law. The activities of the resurrectionists and burkers quickly came to an end. Time has proven the wisdom of this act.

While physicians were among the early settlers in America, medical education arrived much later. Until 1765, when Dr. John Morgan founded our first medical school, a part of the College of Philadelphia which has subsequently become the University of Pennsylvania, American doctors were educated in England or served an apprenticeship under a practicing physician. But formal courses in anatomy had been offered prior to the opening of the first medical school. In 1750, Dr. Cadwalader of Philadelphia gave lectures on and demonstrations in human anatomy. In 1762, Dr. William Shippen, Jr., of the same city began a similar undertaking; three years later, he was made Professor of Anatomy when our first medical school was founded. Also in New York in 1763, Dr. Samuel Clossy began anatomical instructions. In 1768, when the second medical school, King's College which later became Columbia University, was founded.

Dr. Clossy became its first Professor of Anatomy. Prior to the courses in Anatomy given by these physicians, several autopsies are known to have been performed, and there are records which state that bodies had been anatomized.

Material for these early dissections was obtained by means not wholly dissimilar to those used by the English anatomist for many years. But fortunately, offenses for the purpose of obtaining anatomical material are not numerous among our criminal records, and "Body-snatching" seems not to have been practiced extensively. While it is true that a riot occurred in New York in 1788 because the rioters believed that the anatomists were exhuming bodies for dissection, and that Dr. Shippen was attacked for similar reasons on more than one occasion, for the most part, the corpses of suicides, murders, and occasional paupers, furnished the material for study. During the latter part of the nineteenth century, an impoverished old woman was murdered in Baltimore so that the murderer might sell the body to the anatomy department of the University of Maryland; however, the crime was detected, and the culprit was executed after a fair trial. This case may occupy a singular place in our anatomical history. Today, offenses against dead bodies are very rare. Unequivocally, this is because of the intelligent laws most of our states have adopted.

In the United States, except under unusual circumstances, the individual states have jurisdiction over corpses occurring within their boundaries, and since lack of originality has never been one of the faults of state legislatures, the laws covering dead bodies are not uniform throughout the nation. Even so, any body has certain rights. For that reason, most states recognize the following: a living body has the right to dispose of an amputated limb or segment; a dead body is not property in the true sense, as it cannot be bargained for, bequeathed, or given away except by the deceased, who prior to death can usually specify the means of disposing of his remains; in the usual course of events, the nearest relative has a right to the corpse only for the purpose of interment or cremation; an autopsy cannot be performed against the wishes of the deceased

or his nearest relative except when directed by the coroner; a body may be buried any place that does not offend public decency or constitute a menace, and once interred; it can be exhumed only by a court order.

By now most states have also passed anatomical acts which legalize dissection and provide that unclaimed bodies, under certain circumstances, will be delivered to the medical schools for study. The number of corpses obtained is seldom, if ever, greater than needed, but body-snatching and burking seem no longer to be a "sine qua non" for the study of anatomy. Justly, the doctor has gained support and understanding of a public that does not wish to prosecute him for an inadequate knowledge of anatomy while denying the means of acquiring that knowledge.

Bibliography

1. Guthrie, D.: A History of Medicine, Great Britain, Thomas Nelson & Sons, Ltd., 1946.
2. Seelig, M. G.: Medicine, An Historical Outline, Baltimore, The Williams & Wilkins Company, 1931.
3. Sudhoff, K.: Essays in the History of Medicine, New York, Medical Life Press, 1926.
4. Wilson, R. N.: Medical Men in the Time of Christ, Philadelphia, The Sunday School Times Company, 1910.
5. Sigerist, H. E.: The Great Doctors, New York, W. W. Norton & Company, Inc., 1933.
6. Jirka, F. J.: American Doctors of Destiny, Chicago, Normandic House, 1940.
7. Garrison, F. H.: The Principles of Anatomic Illustration Before Vesalius, New York, Paul B. Hoeber, Inc., 1926.
8. Ball, J. M.: The Sack-'Em Up Men, Great Britain, Oliver and Boyd, 1928.
9. Bailey, J. B.: The Diary of a Resurrectionist, 1811-1812, London, Swan Sonnenschein & Co., Lim., 1896.
10. Corner, G. W.: Anatomical Texts of the Earlier Middle Ages, Washington, Carnegie Institution of Washington, 1927.
11. Bardeen, C. R.: Anatomy in America, Bulletin of the University of Wisconsin, No. 115, Science Series, Vol. 3, No. 4, P. 85-208, 1905.
12. Ball, J. M.: Andreas Vesalius, The Reformer of Anatomy, Saint Louis, Saint Louis Medical Press, 1910.
13. McMurnick, J. P.: Leonardo de Vinci, The Anatomist, Baltimore, William & Wilkins Co., 1930.
14. Singer, C. J.: The Evolution of Anatomy, New York, A. A. Knopf, 1925.
15. Morley, Henry: Anatomy in Long Clothes, Chicago, Priv. Print, 1915.
16. Weinmann, G. H.: A Survey of the Law Concerning Dead Human Bodies, Bulletin of the National Research Council, Vol. 73, (Dec.) 1929, P. 5-199.

♦ *What's* NEW ♦

What's New in Obstetrics and Gynecology

EUGENE T. ELLISON, M.D.*

A synopsis of the recent advances in Obstetrics and Gynecology must include recognition of the fact that the overall improvement in patient care is due to better training of physicians, wider dissemination of information concerning the value of the protection of women's health by frequent medical consultations, improved hospital facilities in both metropolitan areas and in smaller communities, and many new therapeutic principles. The improvement in the economy of the country, plus a realization of the part the community must play in the protection of the health of its citizens, has led to the construction and the staffing of excellent hospitals and other medical facilities in all areas of our state. This has resulted in a striking improvement in obstetrical and gynecological care, probably far in excess of other sections of medicine since the act of childbearing and its sequelae has long been neglected and in many cases relegated to supervision by midwives with most inadequate preparation for such events. Midwifery has been for all practical purposes eliminated in sections of our state by physicians and hospitals participating on a voluntary basis with some aid from benevolent funds. Thus many neglected obstetrical cases are now seen less in our area and others where the local physician and hospitals cooperate for the care of the indigent patients. However, death relative to pregnancy still constitutes the fourth major cause of death in our county and continued effort must be made through newer principles of care involved and put into practice and continued research in our major institutions carried out if progress is to continue.

The field of fetal wastage through abortion is beginning to be better understood with a thorough study of aborted material. Molar changes in aborted tissue

resembling hydatidiform mole are considered to be present in a high percentage of cases. This observation offers further proof that the continued high percentage of miscarriages are likely to be reduced appreciably at present.

Much productive effort is being expended to reduce fetal wastage in late pregnancy by investigating the underlying causes of abruptio placenta incompetent cervical os, hyalin membrane disease of the newborn, toxemia of pregnancy, and many other causes of premature birth. Numerous analyses of hospital births have made the individual physician more cognizant of the causes and methods of preventing disasters on the local level. Early delivery of the diabetic mothers, more care in dating of the time for elective cesareans, better understanding of post maturity, recognition of the hazards of breech delivery, more careful look at pitocin induction with due regard for its hazards, better anesthesia coverage at delivery, more information on Rh and ABO incompatibilities, better preparation and early recognition of afibriogenemia are some of the more recent advances in obstetrical care. Interesting work on the causation and treatment of toxemia is being done at our local state university at the present time as well as studies on uterine dystocia, induction of labor and obstetrical anesthesia.

Endocrinology has recently added many potent products that are being used to improve obstetrical and gynecological care. Physiological active and less expensive progestational agents make it possible to more nearly produce or augment normal menstrual cycles when combined with our available estrogens. A condition of pseudo-pregnancy so valuable in the treatment of the young women with endometriosis can now be produced with progesterones,

*619 Main, Texarkana, Arkansas

however, the value of these products in preventing abortion and prematurity is still not established. Newer synthetic products resembling the ovarian hormones can inhibit ovulation and are beginning to be used as oral contraceptics. Hormones of the adrenal are finding use in the treatment of menstrual disorders when the disorder can be traced to the inadequate adrenal function by clinical hormone assays that most hospital facilities are now prepared to make. A fairly clear cut condition of polycystic ovarian disease (Stein Leventhal syndrome), has shown some evidence of the role of adrenal in its causation. However, the operations of medullary resection or wedge resection of the ovaries still strikingly improve this troublesome disorder. All the above clinical observations show a reaction of the steroids of the ovary and adrenal through the mediation of the pituitary gland upon their source of production, thus making a system of check and regulation possible. A more recent and somewhat practical interglandular reaction involves the use of pitocin as a galactagogue and an aid in the treatment of puerperal mastodynia.

Considerable improvement in results of gynecological surgery due to the use of local and systemic antibiotics allow us to undertake more definitive surgery on a patient who is a poor surgical risk. More careful evaluation of long term results of gynecological repair procedures have made many improvements in the technique of these operations possible. Many improved procedures for primary and secondary repair of vaginal relaxations in such troublesome disorders as stress incontinence and complete procidentia are available particularly by the abdominal approach. Attention has been directed to the obliteration of the cul-de-sac and the strengthening of the intra-abdominal support structures to prevent enterocele and diseases of the cuff of the vagina after surgery. The place of radical surgery in the treatment of genital cancer is becoming better un-

derstood and its use is now being based on well defined indications. Cancer surgery calls for precise widespread anatomical dissections which is a type of surgery entirely different from the usual gynecological operation. The end results are often seemingly mutilating but with proper psychological preparation are definitely increasing the overall survival of cancer patients. Radical vulvectomy with groin and pelvic node dissection, radical hysterectomy with node dissection and exenteration operations are included in this category. The better understanding of electrolyte and fluid balance by use of standard laboratory procedures plus the availability of all types of readily available parenteral fluids make the care of the critically ill patient more satisfactory for the well informed clinician. These physiological aids plus a well functioning blood bank must be available for our present day improved care and are most essential before radical surgery is carried out.

In the field of diagnosis attention to vaginal discharges has made it possible to easily ascertain much information regarding the hormone balance of the individual, as well as detect disease and infestations. The widespread use of the cancer detection smear (Papanicolaou smear) has become an intricate part of every gynecological examination of the mature female. The carefully evaluated smear, its follow up when indicated, by cold knife cone to determine existing types of extensive cancer, is probably our most important advance in care and fortunately does not add much to the overall cost of the examination. Other office procedures such as endometrial biopsy, hysterosalpingograms, cystograms and gynegrams are being widely used to make the patient's condition more carefully diagnosed.

All these new procedures and information are only a few of the new and provocative ideas that act as a challenge for further advances in the field of obstetrics and gynecology.

A TEACHING SEMINAR
FROM THE
UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE

Hospital Discharge Planning for the Aged*

J. C. DAVIS, M.D. JEANNE W. YEIDER, M.S.W. RACHAEL DAVENPORT, R.N.

INTRODUCTION

Numerous articles have been written concerning the problem of medical care for the aged (1, 2, 3). The emphasis in many of these is on the need for more hospital beds for this age group. In spite of these views, hospital beds are readily available for almost all medical or surgical emergencies. However, the number of aged patients requiring medical or nursing care is increasing at an unprecedented rate. If these were all to be hospitalized, this state and this country as well would soon require additional facilities to care for the acutely ill and injured of all ages.

At this hospital a unit has been formed for the care of chronically ill patients who have recovered from the acute illness which led to their hospitalization. We recognized the need for better planning to meet the problems facing these patients and their families after discharge. In this paper will be presented the experience of this unit for the year 1960.

DESCRIPTION OF UNIT

This unit has 20 beds with eight private rooms, one four-bed ward, and one eight-bed ward. Most of the patients for whom discharge is being planned are grouped in one of the wards. This grouping facilitates discharge planning, and also helps both the patient and his family accept his discharge.

Twenty-three patients were discharged from this unit during 1960. Nearly all of these presented major discharge problems as a result of their disabilities or because of resistance by the family or patient to leaving the hospital. Only one of the 23 patients discharged returned to the hospital because of inadequate planning. The median age of this group was 63. Seven-

TABLE I

Patient	Age	Clinical Diagnosis
1. A.R.	21	Transverse myelopathy, pyelonephritis.
2. H.H.	52	Cerebrovascular accident.
3. C.A.	65	Rheumatoid arthritis, Duodenal ulcer.
4. A.H.	54	Cerebrovascular accident, pyelonephritis.
5. O.C.	67	Cerebrovascular accident, pyelonephritis, hypertensive cardiovascular disease.
6. H.S.	44	Quadriplegia due to spinal cord trauma, pyelonephritis.
7. C.G.	62	Cerebrovascular accident, generalized arteriosclerosis, pyelonephritis.
8. J. C.	66	Cerebrovascular accident, arteriosclerotic heart disease, pyelonephritis.
9. M.K.	49	Rheumatoid arthritis.
10. C.M.	74	Generalized arteriosclerosis, cerebrovascular accident.
11. N.B.	62	Cerebrovascular accident, pyelonephritis.
12. J.M.	90	Generalized arteriosclerosis, diabetes mellitus, cerebrovascular accident.
13. V.L.	63	Essential hypertension, cerebrovascular accident.
14. F.G.	72	Generalized arteriosclerosis, cerebrovascular accident.
15. H.N.	46	Cerebrovascular accident.
16. J.C.	67	Generalized arteriosclerosis, cerebrovascular accident.
17. M.F.	73	Cerebral and generalized arteriosclerosis, benign prostatic hypertrophy.
18. L.B.	53	Cerebrovascular accident, diabetes mellitus, arteriosclerotic heart disease.
19. G.G.	75	Fracture, femur. Chronic brain syndrome.
20. W.F.	72	Arteriosclerotic heart disease, auricular fibrillation, Laennec's cirrhosis.
21. L. Mc.	70	Emphysema, tuberculosis.
22. O.V.	61	Cerebrovascular accident.
23. L.B.	52	Hypertensive cardiovascular disease.

*From the Departments of Medicine, Social Service, and Nursing Service, Consolidated Veterans Administration Hospital, Little Rock Division, Little Rock, Arkansas.

teen of these patients had cerebrovascular disabilities, three had neurological (exclusive of cerebral vascular) diseases, and three presented other problems such as rheumatoid arthritis and chronic pyelonephritis (Table I). Fifteen of the 23 patients had some degree of residual paralysis. Two patients were severely incapacitated by arthritis.

Eleven patients died during the year. Ten of these deaths were the result of cerebrovascular disease with such complications as pyelonephritis or bronchopneumonia. Four patients remained on the ward during the entire year covered by this report.

GENERAL DISCUSSION

Patients who are discharge problems are always patients who are either physically or mentally inadequate to live independently. The most common disease of old age is mental illness (4). The patient's reaction to discharge is determined by many factors; his physical condition, his emotional make-up, the way he meets life experiences, and his home environment outside the hospital. In chronic illnesses complete recovery is not expected, yet the patient and his family often fail to accept this. They feel that further hospitalization is the sole hope for eventual recovery. Recognition of this attitude led to appreciation of the necessity for teamwork on the part of the doctor, nurse, and social worker in approaching post hospitalization planning.

The average length of hospital stay was quite prolonged in most instances as can be seen in Table II. Since many of these

TABLE II
LENGTH OF HOSPITAL STAY

Less than 1 month	0
1-3 months	7
3-6 months	9
6-12 months	6
Over 1 year	1

patients were quite elderly, the recovery from illness was slower and the disability frequently had more emotional overtones than in a younger person. Many of the patients developed an attachment to or feeling of dependency on the hospital environment which was so strong that it was difficult to discuss plans objectively.

Each of the team members became aware of this so that discussion of the

care of the patient following discharge was begun early in his hospitalization. The attitude of the unit toward each patient was one of expected discharge in every case. The defeatist attitude of the family was not encouraged by any of the staff.

How important this early planning and unity of purpose are became most evident in the case of one transfer to another hospital. In this instance the patient and his wife became so emotionally dependent on the hospital that discharge could not be mentioned, and therefore, other plans could not be made. Since this installation is several hundred miles from his home, it was felt that more could have been accomplished in discharge planning in a hospital nearer his home.

In a team approach the doctor assumes the leadership and sets the pace and climate for the team members. It is he who must inform the patient, his family, the nurse, and the social worker about the patient's physical condition, his capabilities, limitations, and the type of discharge plan needed. The way in which the doctor introduces the social worker into the situation often has much bearing on the way she is received by the patient and family.

The social worker's main function in discharge planning is to help the patient and his family work out a plan whereby the patient can receive adequate care outside the hospital. In discharge planning the social worker considers and evaluates all of the resources of the family or the patient (Table III). These include the home environment, financial status, and

TABLE III
RESOURCES FOR DISCHARGE
PLANNING

Family (home)	12
Relative	5
Nursing Home	3
Domiciliary	2
Other Hospitals	1

the resources within the community in which he lives. In some instances additional financial help may be needed. Beyond these, the patient's emotional needs certainly must be considered.

The nurse's role in discharge planning is primarily supportive. However, failure from the start may occur if the nursing service does not understand and follow

FEATURES

through with the part it is to play. For the patient with severe physical disability, the nurse is a teacher. She teaches the patient how to help himself and she instructs the family how to help the patient. The teaching of the rudiments of his care may be done most effectively in informal sessions at the bedside.

When doubt exists on the part of the family as to its ability to carry out nursing procedures for the patient, demonstration by the nurse is preferable to demonstration by the nursing assistant. When the male nursing assistant gives demonstrations which may involve lifting and turning the patient, a spouse may feel that she will not be physically able to do this at home. The nurse must remain alert to the needs of the family, as well as the patient, and use every opportunity to foster the independence of both. She must give reassurance but never false hope.

It is also the responsibility of the nursing service to initiate a nursing care referral to the Visiting Nurse Association or the Public Health Nursing Service. This may implement the discharge of the patient and give added nursing care that is so often needed after discharge.

The Nursing Home is becoming a more and more important resource as the numbers of aged and infirmed patients increase. When a patient is discharged to a Nursing Home, a representative of the home meets with the patient and the team members. The method in which the physical and emotional needs of the patient are being met is discussed. This alleviates much fear on the part of the patient regarding a change in his environment. Many fears and anxieties of older persons are the result, not so much of any physical deterioration, but of changes in their life situations (5).

The quality of the marital relationship and the role each has played in the family is of utmost importance with married patients. In some instances the wife had depended on her husband to make decisions so that she was unable to do so herself when the need arose. In seven of the 13 married patients the marital relationship was the most important factor to consider. In one case the wife had to have reassurance that she would not be neglecting her husband if she continued to work. In another case the wife had to be helped to accept her husband's limitations before she could plan realistically for him. One of the seven went to the home of his sibling, and another was discharged to his own home, but only after much concentrated effort by the team.

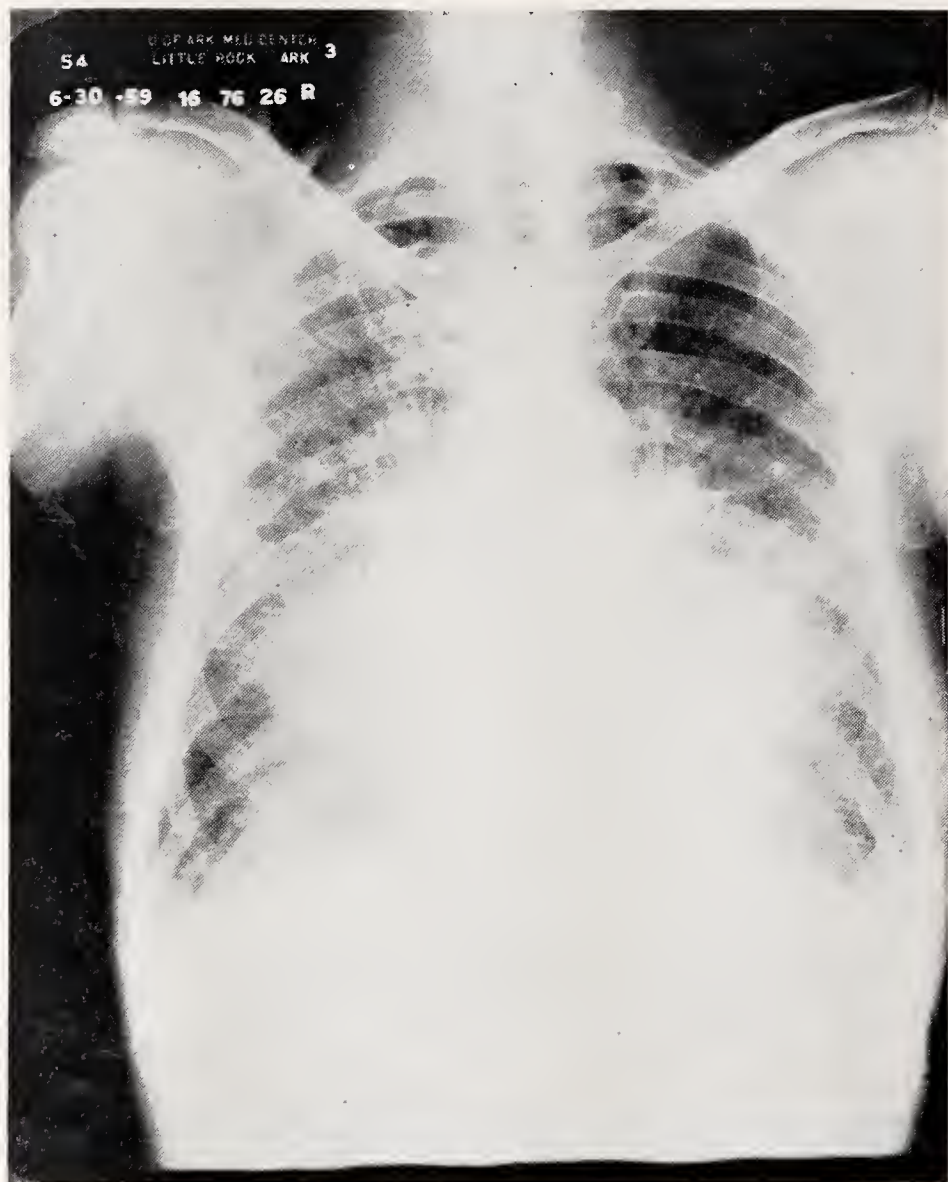
CONCLUSION

The purpose of this study was to share our experience in discharge planning. According to our study, relatives are still the most important resource in discharge planning, even though nursing homes are becoming more important. In addition, we found it takes knowledge, skill, patience and team cooperation to do effective discharge planning.

Bibliography

1. Johnson, Wingate M.: Medical Management of Older Patients. *J.A.M.A.* 175:649, 1961.
2. Shock, Nathan W.: Current Concepts of the Aging Process. *J.A.M.A.* 175:654, 1961.
3. Wilbar, Charles L., Jr.: Keep the Aged Healthy: The Prevention of Certain Chronic Illnesses in the Aged. *J. Amer. Geriat. Soc.* 9:25, 1961.
4. Goldfarb, Alvin I.: Psychiatric Disorders of the Aged: Symptomatology, Diagnosis and Treatment. *J. Amer. Geriat. Soc.* 8:698, 1960.
5. Feldman, Peter, Mulcahey, Cecelia, and Brudno, Joseph. A Different Approach to the Treatment of the Older Male Veteran Patient. *J. Amer. Geriat. Soc.* 9:119, 1961.

What Is Your Diagnosis?



From Radiology Dept., University of Arkansas Medical Center.

FOR ANSWER SEE PAGE 222

Arkansas Public Health at a Glance

Vision Screening in Arkansas Schools

JOSEPH A. NORTON, M.D.*

It is the purpose of the school vision screening program to locate and bring to the attention of an appropriate professional person or agency, individual children who need eye care. This program has been under the direction of the Maternal and Child Health Division of the Arkansas State Board of Health for the past 13 years and many children have received eye care who, in all probability, would not have if there had been no means of detecting these vision difficulties.

The State Health Department under the guidance of a committee from the Eye, Ear, Nose and Throat Section of the Arkansas Medical Society established standards and referral criteria for vision screening at the beginning of the program, and these have been reviewed periodically by the E.E.N.T. Section since then.

The Massachusetts Vision Test Kit, which was accepted by the Council on Physical Medicine of the American Medical Association, was selected as the screening device to be used in the school vision screening program. This screening device was chosen because it embraces a battery of three component tests designed to detect the more common eye problems of children as well as for its simplicity of operation.

Parts one and two of the test use an abbreviated lighted Snellen Chart consisting of E symbols. Part one tests for visual acuity at a distance of 20 ft. This test will detect myopia and also severe cases of astigmatism. Part two tests for hyperopia using the plus sphere lenses (+2.25 diopters through age 8 and +1.75 diopters for ages 9 and up) at a distance of 20 ft. Part three of the test uses the Maddox rod test for muscle imbalance and tests both horizontal and vertical phoria at distance and vertical phoria at near point.

This vision screening program is available to all schools, public, private and parochial, in Arkansas. Schools request-

ing this program agree to furnish lay volunteers to be trained in the screening procedures and a suitable place with controlled lighting for the testing. The Maternal and Child Health Division furnishes supplies and also lends the Massachusetts Vision Test Kit free of charge to the school.

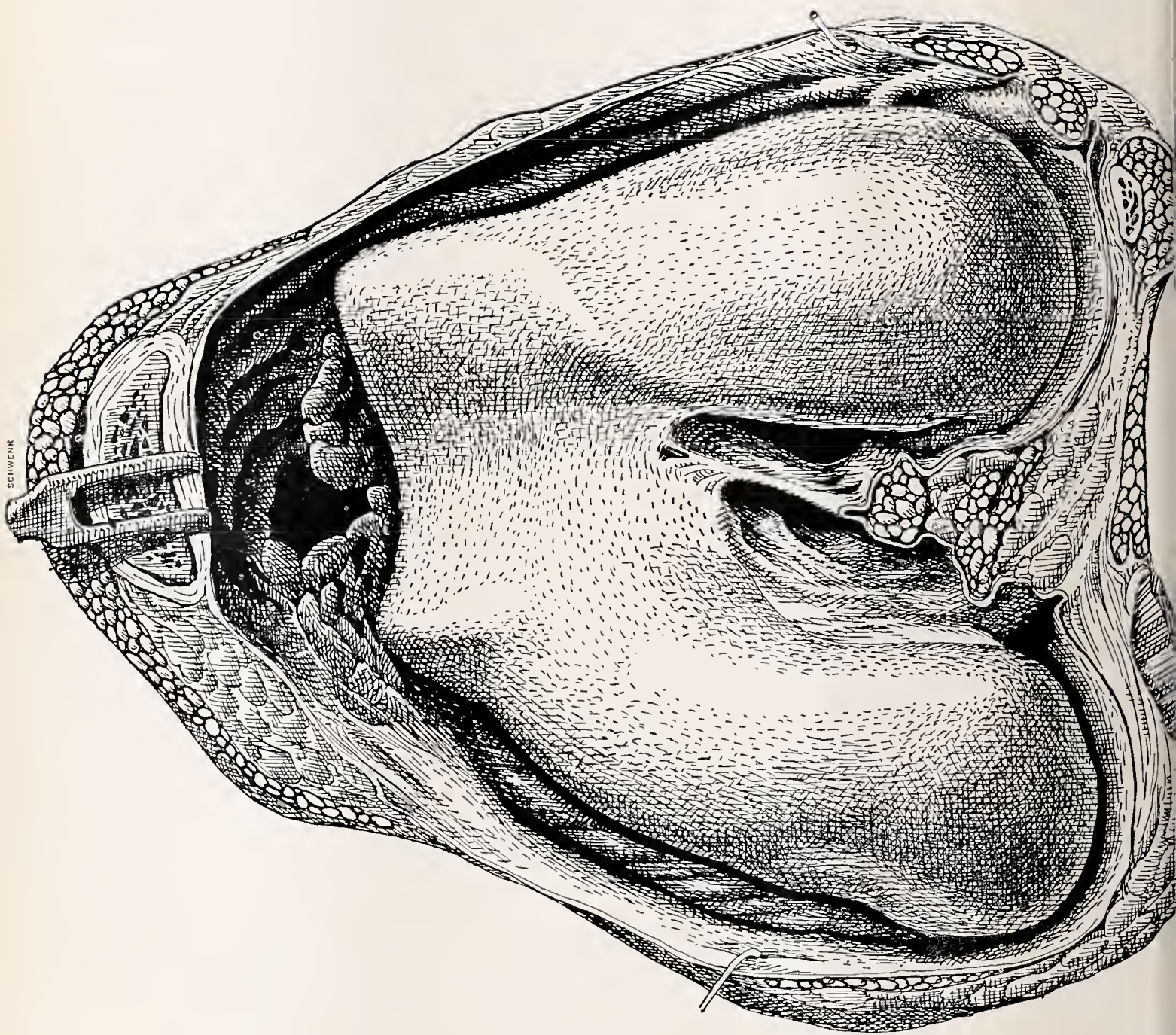
Vision consultants from the Maternal and Child Health Division train the local Public Health Nurse and the volunteers to administer the screening test. Children who fail the initial screening are retested about two weeks later. If they fail the second test they are referred, by means of a letter to the parents, for a complete professional eye examination. It is requested that a report be returned to the school that this examination has been made, with any suggestions or recommendations to the teacher regarding seating, lighting, wearing of glasses, etc.

It is clearly emphasized to school officials, teachers and parents that this is a screening test and is by no means a complete eye examination. The fact that a child passes the screening test is no assurance that he does not have an eye problem. On the other hand some children who fail may be found on professional examinations to be without a vision problem. However, every effort is made to avoid unnecessary referrals.

Vision screening tests are a part of the total school health program and as such should be discussed in the health instruction of the child. Therefore, schools are urged at the time the screening program is being conducted in their school to teach units on care of the eyes, lighting or other appropriate units pertaining to vision.

The following table is a report of vision tests which have been given under the direction of the State Health Department. These figures do not show the school year of 1960-61 since the report for this year is incomplete. Some schools have failed to submit reports and other schools have purchased their own vision screening

*843 Donaghey Building, Little Rock, Arkansas



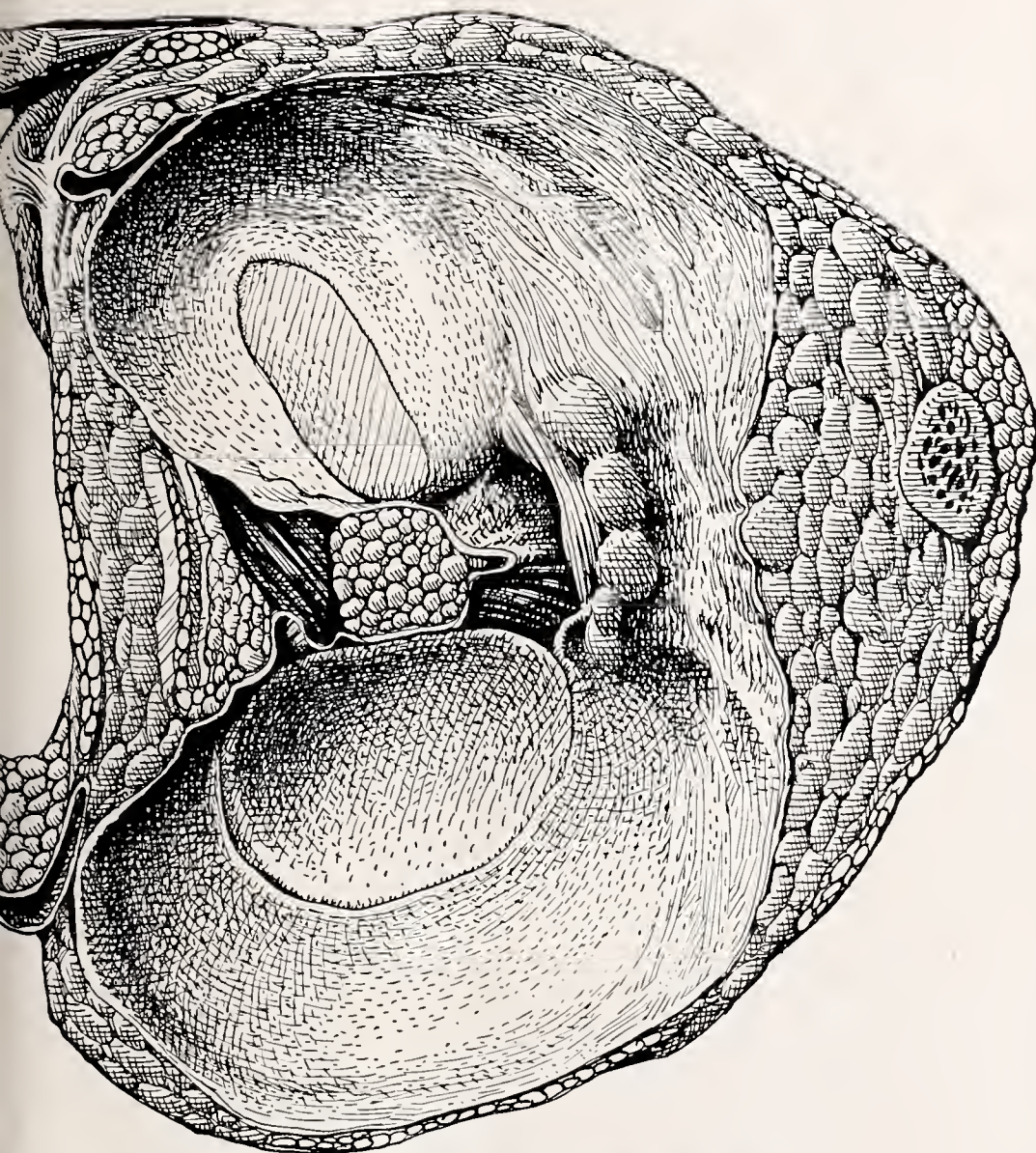
because patients are more than arthritic joints...
controlling inflammatory symptoms is frequently not enough

Even cortisone, with its severe hormonal reactions, can effectively control inflammatory and rheumatoid symptoms. But a patient is more than the sum of his parts — and the joint is only part of a whole patient. Symptomatic control is but one aspect of modern corticotherapy, because what is good for the symptom may also be bad for the patient.

Unsurpassed "General Purpose" and "Special Purpose" Corticosteroid...
Outstanding for Short- and Long-term Therapy

Aristocort[®]

Triamcinolone Lederle



(Knee Joint, Left: distal end of femur; Right: proximal end of tibia)

ARISTOCORT is an outstanding "special purpose" steroid when the complicating problem is increased appetite and weight gain, sodium retention and edema, cardiac disease, hypertension or emotional disturbance and insomnia.

ARISTOCORT provides unsurpassed anti-inflammatory control without sodium retention or edema — without the undesirable psychic stimulation and voracious appetite.

Applied: Scored tablets (three strengths), syrup, parenteral and various topical forms. Request complete information on indications, usage, precautions and contraindications from your Lederle representative, or write to Medical Advisory Department.



LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY • Pearl River, New York

FEATURES

equipment and do not submit reports to a central agency.

Vision Program for 1948-49 through 1959-60

Year	Screened	Referred for Medical Attention
1948-49	15,265	1,249
1949-50	36,884	2,925
1950-51	37,597	2,956
1951-52	34,591	2,988
1952-53	55,800	5,116
1953-54	68,344	6,339
1954-55	70,604	5,086
1955-56	62,247	4,303
1956-57	64,181	4,300
1957-58	72,739	5,501
1958-59	73,967	4,354
1959-60	75,592	5,008

RESOLUTION

WHEREAS God in his infinite wisdom has seen fit to take from this life Dr. A. W. McCullough in the prime of a fruitful life, and

WHEREAS Dr. A. W. McCullough was a staunch and participating member of his church, a kind and devoted husband, and

WHEREAS Dr. McCullough served the people of this community in the field of

medical education and other endeavors with great skill, and

WHEREAS Dr. McCullough's many devoted friends and students will long remember the excellent quality and character of his friendship and services, and WHEREAS many people of many types and conditions will miss him and regret his passing, therefore

BE IT RESOLVED, by the Pulaski County Medical Society, of which Dr. McCullough was a member, that we are sorrowed by his departure,

THAT we extend our deepest sympathy to Mrs. McCullough, his family and his many friends,

THAT we shall forward a copy of this resolution to Mrs. McCullough,

THAT we shall incorporate this resolution in the minutes of the Society, and

THAT we shall cause the resolution to be published in the Journal of the Arkansas Medical Society.

Inscribed by a Special Committee

W. M. Hamilton, Chairman

John Laurens

Louis Tolbert

Editorial:

Member of Board of Trustees Writes President-Elect of AMA a Letter

Dr. George M. Fister
President-elect
American Medical Association
385 24th. Street,
Ogden, Utah

Dear George:

As the new President-elect of the American Medical Association you will be in a strong position of leadership of American medicine for the next two years. The doctors of America will be looking to you for strong leadership in these particular times when so much is at stake as far as the future medical care of the American people is concerned.

The American people deserve to have continued the best medical care available in the world as they now have under the American way of life. This has been accomplished under a system of freedom for the patient and for the physician. This freedom must be continued.

Everyone knows now that this marvelous system is being challenged by those who are promoting a system of governmental control which is contrary to the well-known American way of life. The socializers are at work to capture American medicine and change the system which has led to leadership in the world in medical science.

There is one definite way to stop this movement and it can be done with your leadership. I am sure that 99 per cent of the physicians of America will endorse the resolution which was adopted in New

York at the recent AMA meeting which states "THE MEDICAL PROFESSION WILL NOT BE A WILLING PARTY TO IMPLEMENTING ANY SYSTEM WHICH WE BELIEVE TO BE DETRIMENTAL TO THE PUBLIC WELFARE."

American medicine must present a united front to the Congress and in clear language tell the Congress that no medical system will work without doctors. Any system adopted must have doctors to implement it, otherwise it will be a failure. Let the Congress know definitely that the doctors of America will not implement such legislation as is proposed in the King-Anderson Bill.

If the Congress definitely understands that the medical profession will not be a party to the implementation of such legislation, then there will be no point in passing such legislation.

The government cannot administer such a system of medicine without the cooperation of the medical profession. Therefore, the medical profession need not surrender to the socializers if the leadership of American medicine will have enough backbone to frankly face the issue with the Congress.

With best regards, I am

Sincerely,
R. B. Robins, M.D.
Member—Board of Trustees
American Medical Association

MEDICINE IN THE NEWS

Fort Smith Doctor Attends Seminar

Dr. Arthur Franklin Hoge, Jr., Fort Smith gynecologist and chairman of the Professional Education Committee of the American Cancer Society, attended the first International Congress of Exfoliative Cytology in Vienna, Austria.

The theme of this meeting was "Hormonal Evaluation as Reflected in Cytological Examinations." The newer methods of ascertaining radiation effectiveness in the treatment of cancer was discussed.

Dr. Hoge and his wife met with 75 other doctors of this country in New York and left by chartered jet.

State Medical Group Meets in Forrest City

The state meeting of the Arkansas Society of Medical Technologists was held in Forrest City. Dr. L. W. Diggs, director of the University of Tennessee Laboratories, in Memphis, and consultant in hematology to the Armed Forces Institute of Pathology in Washington, D. C., spoke on "Laboratory Diagnosis of Hemorrhagic Diseases." Dr. T. F. Dilday, department head of pathology at the University of Arkansas Medical Center in Little Rock, spoke on "Differential Diagnosis of Anemia." Dr. William K. Bell, pathology head of St. Bernard's Hospital in Jonesboro, talked on "Effect of Radiation of the Blood-forming Mechanism of the Human Body."

The Central East ASMT were the hosts at the meeting. William H. Rutledge of Forrest City is the president of that society.

Plans Told for New Medical Office Building in Little Rock

A new medical office building will be built on the northwest corner of University Avenue and the 8th Street Expressway in Little Rock. Dr. Barney P. Briggs, president of the company planning the building, said the multistory structure will have 78,000 square feet of space and parking space for 500 vehicles. Every detail of this building is being planned for the convenience of patients.

Dr. Briggs was elected president of the developing company, Little Rock Land Company, Inc. Other officers elected are Dr. Joseph A. Norton, vice president; Dr. F. R. Buchanan, secretary; and Dr. Calvin J. Dillaha, treasurer. The board of directors of the company include Drs. Briggs, Norton, Dillaha, Daniel H. Autry, A. J. Brizzolara, Harvey Shipp, J. W. Downs, Deane D. Wallace and James W. Headstream.

The corporation has exercised its option to buy an 11.8-acre tract of land bounded by University Avenue, West 7th Street, Arthur Street, and West 8th Street. A five-to six-story modern office building will be constructed on half of the property with the remainder reserved for further development.

The total land area covers six city blocks, with three blocks planned for the building and parking space. Plans call for a modern pharmacy, bank facility, restaurant, barber shop and other businesses to be located on the ground floor of the building.

Construction of the \$1.5 million building is expected to begin during the spring of 1962 with the building being ready for occupancy July 1, 1963. Architects for the building are Erhart, Eichenbaum, Rauch and Blass. Little Rock Land Company, Inc. was incorporated with a capital in excess of \$400,000 by 40 physicians and two dentists.

The Month in Washington

WASHINGTON—The American Medical Association cited more than 50 reasons why the vast majority of the nation's physicians believe the Administration's medical care program would be "bad medicine for the people of this country."

The AMA's objections to the proposal were spelled out in a detailed, 91-page printed statement presented to the House Ways and Means Committee by Dr. Leonard W. Larson, Bismarck, N. D., president of the AMA.

The committee held two weeks of hearings (July 24-Aug. 5) on the Administration proposal (H.R. 4222) which would provide limited hospitalization, nursing home care and outpatient diagnostic services for social security recipients. The

program would be financed by an increase in payroll taxes on workers, employers and the self-employed.

Dr. Larson declared that the Administration program would force upon Americans a system of health care in which the quality of medical care would deteriorate, in which quality would become secondary to cost.

He said American medicine is the best in the world, medical education unsurpassed and the qualifications of U. S. physicians unmatched.

"Ours is a dynamic system of health care—and it works," he said. "The very fact that we now have 16½ million Americans 65 years of age and older proves that it works.

"Yet, this same system of medical care is now under attack. At a moment when American medicine is pre-eminent throughout the world, it is proposed that we adopt the very systems under which one European nation after another has lost its former leadership in medical science.

"The staggering costs of such plans, the administrative problems they create—let these considerations be secondary," he said. "The important thing is to see, at close range, the disruption of the doctor-patient relationship; the delays in admission to hospitals; the time wasted in the over-crowded offices of doctors; the regimentation of medical practice; the effect of the program on medical research; the availability of medical facilities and personnel—in other words, medicine in action on a government-run, assembly-line basis."

Dr. Larson said also:

1. Congress is being asked to plunge into a compulsory government-operated program of health care for certain of the country's elderly without knowing what even the first-year cost will be—whether \$1 billion or \$4 billion—and without any clear idea of the extent of the problem it seeks to solve.

2. The bill under consideration would give a single government official the power to "become the nation's czar of hospital care."

3. Contrary to statements of supporters of the measure that physicians' serv-

ices are not included in the program, more than 50,000 doctors would be directly affected by regulations and controls exercised by government over operations and administration of hospitals.

4. Enactment of the program would "lower the quality of medical care available to the older people of the United States" because "it would introduce into our system of freely practiced medicine elements of compulsion, regulation and control" by government.

5. The Administration proposal is unnecessary in light of the true economic status of the aged and because of the spectacular rise of voluntary, private health insurance coupled with passage by Congress of the Kerr-Mills Medical Aid for the Aged Law last year and the existence of other public and private programs of aid to the needy.

6. Health care at the expense of the working people would be provided for millions who are financially able to pay for their own care.

7. The legislation "proposes that we distrust the brains and capacities of today's Americans" because "it suggests that the aged—as an entire group—are not capable of looking after their own affairs and providing for their own needs."

8. Increasing costs of the program could impose such a financial strain on social security that the entire system could be jeopardized.

9. The Administration's bill is just as objectionable as the five similar health care proposals rejected by Congress since 1942.

10. The bill would violate "American ideals of independence, self-sufficiency and personal responsibility" by establishing a system in which medical aid would be provided not on the basis of need but on the basis of age.

Dr. Larson described estimates of the cost of the Administration program as "confusing."

The AMA president reminded committee members that HEW Secretary Abraham Ribicoff had told them that "a closer study" had revealed it would be necessary to increase the taxable wage base from the present \$4,800 to \$5,200, rather than

the \$5,000 fixed in the bill when it was introduced.

He also pointed out that HEW originally had said nursing home services during the first year of operation of the Administration scheme would cost \$9 million.

But in May, Dr. Larson said, HEW officials reported the figure as "unrealistically low" and lifted it to "somewhere between \$25 million and \$255 million."

"Obviously this estimate is something less than precise," Dr. Larson said.

The AMA president said that supporters of the Administration proposal have built their case on five false premises: 1) that the sociological problems of older people can be solved through legislation; 2) that most, if not all, of the aged are in poor health; 3) that most, if not all, of the aged are verging on bankruptcy; 4) that the problem of the aged in financing their health costs will get worse before it gets better, and 5) that voluntary health insurance and prepayment plans, private effort and existing law will not do the job that needs doing.

Heart Grants Given to Medical Center

A group of related scientific projects at the University Medical Center got a shot in the arm from the Arkansas Heart Association.

Four grants were made totaling \$32,700 to further advance knowledge about man and how to handle his heart-related health problems.

One grant, for \$10,000 went toward the purchase of a piece of equipment called a photoelectric spectro-polarimeter. It is an automatic recording device that will supplant the minute by minute analysis of various solutions in a study of connective tissues. Dr. John Pierce, associate professor in medicine, and Dr. Harold Resnick, instructor in biochemistry, head the project.

Dr. Pierce said the machinery will make ultra-fine measurements and will record data.

A grant of \$15,000 went to Dr. Pierce to support his work in basic heart-related research. This is the fifth year the heart association has supported the work of Dr. Pierce. The AHA board of directors has

renewed the grant for an additional five years.

Dr. Masauki Hara, professor of surgery, and Dr. James E. Doherty, staff member at the medical center and VA Hospital, received a \$6,500 grant to study reactions of patients following open heart surgery. Dr. Hara said reactions to certain drugs can vary between open heart surgery patients and others.

Two student summer research grants will be supported by the fourth grant, for \$1,200. Bill North, executive secretary of the Arkansas Heart Association, presented the checks.

Denver Winter AMA Meeting Offers Excellent Scientific Program

The 15th annual clinical meeting of the American Medical Association will be held Nov. 26-30 at Denver, with a program geared to basic problems of medicine faced by physicians in their practice.

An outstanding scientific program, with emphasis on new research developments, has been planned under the direction of Samuel P. Newman, M.D., Denver, chairman of the AMA's Council on Scientific Assembly.

Some highlights will include sessions and papers on such important areas of medicine as genes and chromosomes, electronics and computers in medicine, space medicine, medical aspects of American habits, new developments in virology, treatment of radiation injuries, new findings in chemotherapy for cancer and latest data in the field of antibodies and antigens, Dr. Newman said.

With more and more nuclear reactors coming into use all over the nation, many practicing physicians soon may begin to face the problem of treating injuries from radiation accidents, the chairman said.

A section of internationally known experts in the treatment of radiation injuries will offer three major papers in this important new area of medical care. Chairman will be Marshall Brucer, M.D., chairman of the medical division, Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tenn.

The radiation experts will discuss such topics as "Potential and Probable Sources of Radiation Accidents," "Diagnosis and

Pathology of Radiation Injury" and "Treatment and Prognosis of Radiation Injury." Participants will include researchers from Los Alamos and Oak Ridge, the Office of the Surgeon General and the University of Chicago.

The age of advancing physical science also offers new findings to medical science: the use of electronics and computers in medicine. Chairman of this section at the Denver meeting will be A. H. Schwichtenberg, M.D., head of the department of aero-space medicine, Lovelace Foundation for Medical Education and Research, Albuquerque, N. M.

Computer systems for recording medical data to aid the physician in his diagnosis and prognosis will be discussed. Topics will include "The Future of Electronics in Medicine," "Microelectronics and New Concepts of Bioinstrumentation," "A System for Medical Data Recording," and "Biological Computers."

The virus, one of the most complex problems facing the clinician, will be the subject of a series of papers by outstanding specialists. Jonas E. Salk, M.D., Pittsburgh, originator of the killed virus polio vaccine, will give a paper on "Immunization Against Virus Diseases." Other topics will include "The Nature of the Virus and Its Cellular Reaction," "Smallpox Vaccination Complications," "Virus Hepatitis" and "Identification of Viruses."

A group of Denver physicians, plus a colleague from Wyoming, will present a study of medical aspects of American habits as a highlight of the program.

William Covode, M.D., of Denver is chairman of the section. The program will include such topics as "The Coffee Break," by E. Chester Ridgway, M.D., Cody, Wyo.; "The Psycho-Stabilizers," by Jack O. Stoffel, M.D.; "Psycho-Sexual Aspects," by Bradford Murphey, M.D.; "The Pet in the House," by Francis T. Candlin, D.V.M.; "Automobile Driving," by Horace E. Campbell, M.D., and "The Cocktail Hour," by Clyde E. Stanfield, M.D.

The Colorado group has been studying the various American habits to be covered in the section for some time, and the program is expected to draw wide interest among the profession.

Chemotherapy in cancer, an area in which knowledge is growing rapidly, will be another important feature of the clinical meeting program.

Subjects in this area will include "A Survey of Chemotherapeutic Agents in Malignancy," "Chemotherapy of Leukemia and Malignant Solid Tumors in Children," "Chemotherapy as an Adjuvant to Cancer Surgery," and "Enhancement of Radiotherapy by Oral Methotrexate."

Delivering papers on chemotherapy in cancer will be S. D. Mills, M.D., of the Mayo Clinic, Rochester, Minn.; Warren H. Cole, M.D., of the University of Illinois, and E. Shanbrom, M.D., of Orange County General Hospital, California. Paul K. Hamilton, M.D., of Denver, will be chairman.

Much new knowledge has been gained in the last decade in the important area of antibodies and antigens. Several papers have been scheduled to report some of the new findings to the clinicians.

Subjects include "Autoimmune Disorders," "Thyroiditis," "Rheumatoid Arthritis" and "Molecular Aspects of Antibody and Production and Specificity." Other topics of interest in the area of antibodies and antigens include "Lupus Erythematosus Cells," "Hepatitis With Associated Lupus Erythematosus," "Insulin Resistance" and "Homografts."

A paper on "Fact and Fancy Regarding Glasses" will be presented by two Denver ophthalmologists, M. Kaplan and George A. Filmer. Duane D. Lahey, M.D., of Denver, will discuss "Indications for Contact Lenses."

Suicide will be analyzed in a section that will be of importance to the clinician to assist him in recognizing symptoms and taking preventive steps among his patients. Topics on this subject will include "Statistics and Public Health Significance," "Causes," and "Prevention."

A study of heredity as it relates to human ills will be presented as a feature.

Geneticists are rapidly advancing fundamental knowledge in this highly important medical field. This new knowledge will be passed on to clinicians for their guidance in practice.

"Genes, Chromosomes and Human Disease" will be the general subject of the

section, under chairmanship of Leroy J. Sides, M.D., of Denver.

Theodore T. Puck, Ph.D., head of the department of Biophysics at the University of Colorado, will relate some of his new research findings in a paper entitled "The Gene and the Protein Molecule."

Other topics will include "Genes and Chromosomes," by David M. Bonner, Ph.D., University of California biologist; "Hereditary Aspects of Disease," by Walter Burdette, M.D., Salt Lake City; "Hemoglobinopathies," by Max Wintrobe, M.D., Salt Lake City.

John H. Talbott, M.D., of Chicago, editor of the Journal of the American Medical Association, will deliver a paper on "Gout" as a part of this section.

Much has been learned by the specialists in space medicine that will be of value to the practicing physician in treating patients who seldom get off the ground. This knowledge also will be presented in a section in space medicine at the meeting.

"The Impact of Space Medicine Research on General Medicine" will be presented by Hubertus Strughold, M.D., Ph.D., advisor for research to the commander, Aerospace Medical Center, Brooks Air Force Base, Texas.

Other space medicine topics will include "The NASA Program in Life Sciences," by Brig. Gen. Charles H. Roadman, deputy director of the life sciences division of the National Aeronautics and Space Administration, Washington; "The Air Force Program in Aerospace Medicine," by Maj. Gen. Oliver K. Niess, surgeon general of the U. S. Air Force, Washington, and "Space Radiations: Their Physical Characteristics and Biological Implications," by Col. Gerrit L. Hekhuis, chief of radiobiology, School of Aerospace Medicine, Brooks Air Force Base.

An interesting series of papers will be presented at special breakfast programs Nov. 28-29. Topics for the Nov. 28 breakfast session will be "The Malmstrom Vacuum Extractor in Obstetrics"; "A Pylogram Clinic," and "The Operation of a Poison Control Center." On Nov. 29 topics will be "Community Care of Psychiatric Patients vs. Prolonged Institutional Care"; "Dermatology Quiz Session," and

"Unusual Diagnostic Problems in Pulmonary Surgery."

A series of color television programs during the meeting will include such subjects as "The Art of Psychiatric Interviewing," "Resuscitation of the Newborn," "Total Abdominal Hysterectomy," "Primary Dermatologic Disorders" and "Dermatologic Manifestations of Systemic Disease."

Also scheduled is an outstanding program of medical motion pictures to be screened daily during the sessions.

"The program is designed to assist the physician in his practice. The latest findings in many areas of medicine will be presented by men who are top specialists in their fields. The meeting will be of great value to the clinician in advancing his knowledge."

Dr. Barnhard Has New X-Ray Technique

A University Medical Center radiologist has made it possible to "see" bones grow, through a system of time-lapse X-ray photography.

The innovation will permit heretofore impossible study of bones in experimental animals actually growing together during the process of fracture-healing.

Dr. Howard Barnhard, professor and head of the department of radiology who developed the technique, demonstrated it recently before a forum of science writers and editors in New York City.

Many possibilities were offered by the new technique, Dr. Barnhard said. Studies can be made of the response of various parts of growing, or mature bones to irradiation; reaction of joints to foreign matter and study of bone tumor growth and its response to treatment.

Hot Springs Rehabilitation Center Has Four Consultants

The Hot Springs Rehabilitation Center has retained four local physicians to serve on the consultant staff of the Medical Services Department. According to Center Administrator Dr. Gerald Fisher they are: Dr. King Wade, Jr., urology; Dr. Euclid M. Smith, internal medicine; Dr. Thomas M. Durham, Orthopedics; and Dr. John W. Dodson, ophthalmology.

Dr. Fisher explained that Drs. Wade, Smith, Durham and Dodson will serve as consultants in their specialty fields, conducting weekly clinics for students enrolled at the Center. The appointments in each of these areas are to be rotated every six months among the Hot Springs specialists who desire to serve on the Medical Services Staff and who meet Arkansas Rehabilitation Service standards in their specialty.

Critic Hits Hospitals' Ban On Child Visitors

A note was sent to physicians backing the new hospital visitor regulations: "When you shut the door on a person's own child, you are stabbing him with a two-edged sword without benefit of an anesthetic."

This is a portion of an open letter to the Pulaski County Medical Society from W. K. Heard, Jr., Little Rock realtor. Heard's letter and an answer to it prepared by Sister Mary Evangelist, administrator of St. Vincent Infirmary, have been made public. Heard writes that he believes the medical society resolution that implemented the new regulations "is good and has merit with one exception." That exception he listed this way:

"Let the patient's own children visit him and don't penalize the spouse as a restricted visitor during visiting hours."

Under the new rules, no more than two persons may visit, during visiting hours, with a patient at any one time, and children under 14 are not permitted in the hospitals at all. Heard asked in his letter: "What brightens a sick person the most, a casual visitor, or one of their own children? How many patients have been lost due to a child's hug or kiss? They carry more love than germs." Sister Mary replied that the hospital agrees "a visit from children to sick parents at times does brighten them. . . ." "But," she continued, "hospitals over the country have found that restricting children from visiting in the hospital benefits the patients as well as the children." She added that in emergency circumstances and with the consent of the attending physician, "children will not be deprived of an opportunity to visit with their parents."

Med Center Doctor Gets \$80,000 Training Grant

A five-year, \$80,000 grant to finance a fellowship program for advanced training in internal medicine was awarded to a faculty member of the University of Arkansas Medical Center. Dr. Kerrison Juniper, Jr., assistant professor of medicine, received the first money under the grant \$16,000 for the first year in July. It will be used to train physicians in gastroenterology, which is Dr. Juniper's special field of teaching. It is the latest grant of this type to be made of the Medical Center and represents a steadily growing type of grant which emphasizes training of medical students and physicians as compared to outright medical research.

Dr. Juniper said the grant he has received, which comes from the National Institutes of Health, will finance the salary of a technician, and one trainee in gastroenterology, which is the field of medicine dealing with the stomach and intestinal tract.

The first two trainees are Dr. James H. Agram of Lonoke, a 1955 graduate of the University of Arkansas School of Medicine and Dr. Tom J. Smith of Liberal, Oklahoma, who are now taking residency training in Little Rock in internal medicine.

Mrs. Mary Martin of Little Rock will assist the trainees in their work and also help Dr. Juniper develop teaching equipment.

Dr. Juniper has been a member of the Medical Center faculty since 1956. He came to Arkansas from Boston University where he received his training in gastroenterology. He was graduated from Emory University School of Medicine and received his residency training in internal medicine in Atlanta, Georgia.

Age Distribution of Medical Facilities and Some Selective Service and Mobilization Implications

Information derived from the Faculty Registry provides data which could be of significance in the event of a national emergency. (1) A full recognition of the possible impact of such an eventuality on the medical faculties, coupled with appropriate pre-planning to meet the changing

situation, might do much to minimize the disruption of medical education in a period of stress.

For this reason we present the following information summarized in two parts as follows:

1. Distribution by age of full-time and part-time faculty members.

2. Selective service and reserve status of full-time and part-time faculty members.

From Table 1 it can be seen that somewhat more than half the full-time faculty members were 40 years of age or younger. The distribution for both M.D.'s and non-M.D.'s was similar. The mean age for all full-time faculty members was 42 years; the median was 40 years.

Among part-time teachers in medical schools only about a third were 40 years of age or younger. The mean age for this group as a whole was 47 years; the median was 46 years.

AGE DISTRIBUTION OF FULL-TIME AND PART-TIME FACULTY MEMBERS IN U. S. MEDICAL SCHOOLS DURING ACADEMIC YEAR 1959-60

Full-Time						
Age	M.D.	Percent	PhD. & Others	Percent	Total	Percent
81-90	2	<0.1%	—	—%	2	<0.1%
71-80	18	0.3	21	0.6	39	0.4
61-70	364	5.1	181	4.9	545	5.0
51-60	880	12.4	519	14.0	1,399	12.9
41-50	2,074	29.2	1,014	27.3	3,088	28.6
31-40	3,540	49.9	1,714	46.1	5,254	48.6
21-30	172	2.4	241	6.5	413	3.8
NR	51	0.7	24	0.6	75	0.7
Total	7,101	100.0%	3,714	100.0%	10,815	100.0%

Part-Time						
Age	M.D.	Percent	PhD. & Others	Percent	Total	Percent
81-90	20	0.1%	1	0.1%	21	0.1%
71-80	212	0.9	29	1.9	241	1.0
61-70	1,956	8.3	112	7.5	2,068	8.3
51-60	5,391	23.0	292	19.5	5,683	22.7
41-50	8,454	36.0	479	32.0	8,933	35.8
31-40	7,262	30.9	519	34.6	7,781	31.1
21-30	72	0.3	52	3.5	124	0.5
NR	121	0.5	14	0.9	135	0.5
Total	23,488	100.0%	1,498	100.0%	24,986	100.0%

(1) See the last paragraph of Datagrams, Vol. 2 No. 6, December, 1960 for a discussion of the limitations of the data.

Submitted by the Division of Operational Studies of the AAMC, 2530 Ridge Avenue, Evanston, Ill.

A similar age distribution among full-time and part-time faculty members was reported by Diehl, et al. in the article entitled, "Medical School Faculties in the National Emergency," published in the Jour-

nal of Medical Education, Vol. 27, Part I in July of 1952.

Current provision of the University Military Training and Service Act, passed by the 86th Congress to expire July 1, 1963, limits the liability of doctors, dentists and allied specialists to those who have not yet reached their 35th birthday. Only those specialists who are otherwise liable as regular registrants are subject to induction under the present Selective Service Law.

Information from the Faculty Registry indicates that in the academic year 1959-60 approximately 2,855 full-time and 2,681 part-time faculty members were in the eligible-for-service group on the basis of age. About 26% of the full-time faculty were under 35 years of age. The proportion of part-time under 35 was almost 11%. Information concerning Selective Service classification was not entirely complete for either group. However, based on this tabulation, the proportional distribution of the eligible group according to the five major classifications was as shown in Table 2.

TABLE 2
SELECTIVE SERVICE CLASSIFICATION OF MEDICAL SCHOOL FACULTY MEMBERS UNDER 35 YEARS OF AGE DURING ACADEMIC YEAR 1959-60

Selective Service Classification	FULL-TIME		PART-TIME	
	Number	Percent	Number	Percent
I	196	6.9%	161	6.0%
II	114	4.0	58	2.1
III	84	2.9	30	1.1
IV	547	19.1	511	19.1
V	750	26.3	696	26.0
NR	1,164	40.8	1,225	45.7
Total Faculty Under 35 Yrs. of Age	2,855	100.0%	2,681	100.0%

NOTE: Selective Service Classifications are broken into numerous sub-categories. Those most applicable to the present text are briefly summarized as follows:

- Ia. Available for processing and induction
- Id. Reserve classification
- IIa. Occupational deferment
- IIs, Student deferment
- Va. Mainly those who have been deferred for some reason such as employment or education and are over 26 but under 35 years of age.
- IIIa. Hardship or dependency classification
- IVa. Having a year or more of honorable service
- IVd. Divinity status
- IVf. Physically unfit

It is interesting to note that among those under 35 years of age only about 7% of the full-time and 6% of the part-time faculty members designated category I as their Selective Service classification.

Data pertaining to reserve officer status are shown in Table 3.

TABLE 3
NUMBER AND DISTRIBUTION OF FACULTY MEMBERS REPORTING RESERVE STATUS BY FULL-TIME AND PART-TIME APPOINTMENTS

Status	FULL-TIME		PART-TIME	
	Number	Percent	Number	Percent
Ready	369	23.4%	742	15.8%
Standby	591	37.5	1,211	25.8
Retired	616	39.1	2,735	58.3
Total Faculty Reporting	1,576	100.0%	4,688	100.0%

Six thousand two hundred and sixty-four full-time and part-time faculty members, or 17% of the total faculty included in the Registry, reported holding commissions in the Reserve Officer Corps. Of these, 1,576 had full-time teaching appointments; 4,688 held part-time teaching positions. About 61% of the reserves holding full-time teaching positions and 42% holding part-time positions were assigned to the "Ready" or "Standby" mobilization categories. Among the reserve officers, 219 full-time and 757 part-time faculty members had mobilization assignments.

These data are submitted as being suggestive of some of the adjustments which medical schools collectively would have to make in case of a national emergency.

Arkansas Host to Southern Conference Of Tuberculosis and Thoracic Society

The Southern Tuberculosis and Thoracic Conference was held in Hot Springs in September. Raymond M. McKeown, Secretary-Treasurer of the AMA, was the guest speaker at the opening general session. This is the second time in its 47-year history that Southern Conference has met in Arkansas. It was enjoyed by everyone who attended. Some of the program's highlights were: community action sessions, special film showings, medical sessions, special interest sessions, nursing sessions, and council and committee meetings.

ANNOUNCEMENTS

1962 Meetings of the American College of Surgeons

JANUARY

Four-Day Sectional Meeting for surgeons and graduate nurses, **Los Angeles, California, January 29, 30, 31, February 1.** The Statler-Hilton and The Biltmore Hotels. Dr. William P. Longmire, Jr., Local Chairman for Surgeons' Meeting. Miss Mary E. Meyers, R.N., and Miss Patricia Hummel, R.N., Co-Chairman for Nurses' Meeting.

MARCH

Three-Day Sectional Meeting, **Detroit, Michigan, March 5-7.** The Sheraton-Cadillac Hotel. Dr. James B. Blodgett, Local Chairman.

Three-Day Sectional Meeting, **Memphis, Tennessee, March 26-28.** Hotel Peabody. Dr. Harwell Wilson, Local Chairman.

APRIL

Three-Day Sectional Meeting, **Washington, D. C., April 16-18.** Sheraton-Park Hotel. Dr. Robert J. Coffey, Local Chairman.

NOTE:

FOR ALL INFORMATION, write to: Dr. William E. Adams, Secretary, American College of Surgeons, 40 East Erie Street, Chicago 11, Illinois.

48th ANNUAL CLINICAL CONGRESS, October 15 through 19, 1962, will be held in Atlantic City, New Jersey.

The Interstate Postgraduate Medical Association of North America Announces:

"THE SCIENTIFIC ASSEMBLY" to be held in Cleveland, Ohio — November 13-16, 1961. The Co-Sponsor is the Ohio Academy of General Practice. Features will include luncheons, lectures, color television, demonstrations, and etc. For the ladies there will be a Hospitality Tea, Special Luncheon with Style Show by Halle Brothers and an illustrated lecture on "Oddity in Gems." Time for shopping and the theatre. The Annual Dinner: Illustrated lecture on the underwater adven-

FEATURES

tures of Doctor and Mrs. George Crile, under the title, "SUNKEN SILVER". A program all will thoroughly enjoy! Cost tax deductible as part of educational conference expense. ACADEMY CREDITS acceptable for a maximum of 25 hours of category II, credit by the American Academy of General Practice. All details on luncheons, hotel reservations, etc., can be secured by writing Erwin R. Schmidt, M.D., Box 1109, Madison 1, Wisconsin.

Five intensive postgraduate courses patterned for the practitioner are planned for the fall and winter 1961-62 at the Medical College of Georgia, Augusta, Georgia. Featured faculty will include nationally known figures as: Dr. Ralph V. Platou, Profession of Pediatrics & Head, Dept. of Pediatrics, Tulane Univ. School of Medicine, New Orleans, La.; Dr. Louis A. Goldstein, Associate Professor of Surgery (Orthopedics), Univ. of Rochester School of Medicine, Rochester, N. Y., and Dr. Darius Flinchum, Instructor in Surgery, The School of Medicine Emory Univ., Atlanta, Georgia; Dr. Michael Newton, Prof. and Chairman, Dept. of Ob-Gyn, Univ. of Mississippi Medical Center, Jackson, Miss.; Dr. Harold D. Levine, Peter Bent Brigham Hospital, Boston, Mass.; Dr. Champ Lyons, Prof. and Chairman, Dept. of Surgery, Medical College of Ala., Birmingham, Alabama.

Advances in Pediatric Diagnosis and Treatment, Oct. 31-Nov. 2, 1961; Fractures in General Practice, Nov. 14-16, 1961; Obstetric Problems in Private Practice, Jan. 23-25, 1962; Cardiac Emergencies, Feb. 13-15, 1962; and Pre and Postoperative Care, Mar. 20-22, 1962. The courses will be supplemented by members of the faculty of the Medical College of Georgia.

Each course is acceptable for 18 hours of credit by the American Academy of General Practice and registration is limited to a small group for close participant-faculty communication. Registration fee is \$50.00 for each session. Application may be made by contacting Dr. Claude-Starr Wright, Director, Department of

Continuing Education, Medical College of Georgia, Augusta, Georgia.

At the American Institute of Ultrasonics in Medicine meeting last year, it was announced that there would be a luncheon meeting of the American Institute of Ultrasonics in Medicine in Cleveland to precede the 1961 meeting of The American Congress of Physical Medicine.

The committee had planned to have Doctor Janet Travell, Personal Physician to President Kennedy, as the speaker at this luncheon. We regret to say that Dr. Travell, due to pressures in Washington, will be unable to attend. For this reason, the luncheon has been cancelled.

It is anticipated that in 1962, the AIUM will have a full day meeting. Details of this meeting will be announced as plans are formulated. It is suggested that members send their dues in promptly to insure the success of next year's meeting and to make it possible to invite an outstanding guest speaker. Send dues to John H. Aldes, M.D., Secretary-Treasurer, The American Institute of Ultrasonics in Medicine, Ben R. Meyer Rehabilitation Center, 4833 Fountain Avenue, Los Angeles 29, California.

MEDICO is increasing the number of medical personnel serving in its overseas hospital and clinic installations. There are fifteen MEDICO-supported units in 12 countries in various parts of the world. New requests are being received for additional medical and surgical teams in South America and in the newly emerging countries in Africa.

At present, surgeons, internists, general practitioners, and anaesthesia specialists are needed in Afghanistan, Cambodia, Vietnam, Malaya, Laos, and Haiti. Salaries, length of service and specific information concerning each project will be sent on request. Write Peter D. Comanduras, M.D., Secretary General, MEDICO, Inc., 420 Lexington Avenue, New York 17, New York.

Obituary

Dr. Carl Bungart, 83, 105 North Fourteenth Street, Fort Smith, retired physician and surgeon, died at a local rest home after a long illness. A native of Kansas City, Mo., Dr. Bungart began his professional career in 1902 as a bridge surgeon for a construction firm in Old Mexico. In 1911 he established his office here and practiced until his retirement, except during World War I, when he served with the U. S. Medical Corps at Base Hospital No. 68 in Mars Sue Allies, France. He was a member of the Sebastian County Medical Association, Arkansas Medical Society, American Medical Association, Military Surgeons of the U. S. American Legion, Bell Point Lodge No. 20, Western Arkansas Consistory and Central Presbyterian Church.

Dr. Vincent H. Marques of Lake Village, a physician for the past 10 years of Lake Village, died at his home. Dr. Marques was a former member of the Lake Village City Council and was Chicot County Health Officer at the time of his death. He was a member of Emmanuel Episcopal Church, the Episcopal Laymen's Association, the Lake Village Chamber of Commerce, the American Legion and the Chicot County, Southeast Arkansas and American Medical Associations. He was a graduate of the University of Arkansas School of Medicine and was a veteran of World War II.

Dr. A. W. McCullough, Professor in the Department of Anatomy at the University of Arkansas Medical Center in Little Rock, died July 19 at his home. Death came on his 60th birthday.

Dr. McCullough, who had been with the Department of Anatomy since 1939, came to Arkansas from the University of Kansas where he received his medical training. He started with the University of Arkansas School of Medicine as an instructor.

Dr. McCullough was a member of the American Association of Anatomists, the Society of Experimental Biology and Med-

icine, and the Pulaski County Medical Society. A member of Phi Beta Kappa, he was the author of numerous scientific articles in the field of anatomy and had published a textbook in neuroanatomy.

Born in Indiana, Dr. McCullough received his early training at Central Missouri State College with major in zoology. His wife survives.

Dr. Ralph E. Weddington, 54, medical director of Washington County since February 1, died at his home. He had been a resident of Fayetteville since the end of World War II, and for years was in private practice in Fayetteville.

He was born in Hannibal, Missouri June 24, 1907 and was graduated from Washington University School of Medicine at St. Louis and did his pre-medical studies at the University of Missouri. After an internship at St. Louis Maternity Hospital in St. Louis he did postgraduate work at Children's Hospital in the same city and at Princess Elizabeth Hospital for Sick Children of York in East London. He served as a member of the faculty of the University of Louisville.

During World War II, he was assistant chief of the 1,000-bed 35th Station Hospital and participated in the invasion of Africa and Southern France and the Battle of Germany. He left the service with the rank of major.

Prior to his war-time service he was associated with the Holt-Krock Clinic in Fort Smith and also served as medical director of the public health department in Independence County with headquarters in Batesville.

He was a member of the Methodist Church and a number of professional organizations.

PERSONAL AND NEWS ITEMS

Dr. E. L. Hogue Opens Offices

Dr. Ernest L. Hogue has opened office in Stroud Clinic at 311 East Matthews, Jonesboro, in association with Dr. Paul Stroud for the general practice of medicine and surgery.

A native of Weiner, he is the son of Mr. and Mrs. E. E. Hogue, and a graduate of Weiner High School. He is a graduate of the University of Arkansas and the University of Arkansas Medical School. He interned at Methodist Hospital in Memphis and recently completed a four-year surgical residency there.

Drs. Joe Bill Hall and Fount Richardson spoke to the Fayetteville Lions Club in July concerning the Kerr-Mills Program for Medical Aid to the Aged and the King-Anderson Bill now before Congress.

Mr. Joe Stetler, Chief, Legal Department, AMA, Chicago, was the featured speaker at the District Medical Society at the Camden Hotel, October 3rd.

Dr. E. F. Harper Begins Practice At Mobley Clinic

The association of **Dr. Ernest F. Harper** with Mobley Clinic in the general practice of medicine has been announced by **Dr. Jack E. Mobley**, Morrilton.

Dr. Harper is a native of Little Rock and attended the University of Arkansas in Fayetteville where he received his Bachelor of Science degree. He then entered the University of Arkansas School of Medicine at Little Rock, graduating with the degree of Bachelor of Science in Medicine and Doctor of Medicine. He served his internship in the University of Arkansas Medical Center in Little Rock.

Medical Practice a Tradition In Clarksville's Kolb Family

Dr. James M. Kolb, Jr. joined his father in the medical and surgical profession in Clarksville July 15. Young Dr. Kolb is the fourth member of his family to go into medicine.

This is the only office in Arkansas where four generations have practiced medicine in the same office, according to **Dr. James M. Kolb, Sr.**, past president of the Arkansas Medical Society.

Dr. Kolb's grandfather, the late Dr. Charles P. Clark, started practice in Clarksville in 1867, establishing what is now the "Oldest business" in the county. His father, the late Dr. James S. Kolb, joined the first in April 1892, and Dr. James M. Kolb, Sr. started his practice in July 1931.

Young Dr. Kolb received his degree in medicine in 1959 from the University of Arkansas School of Medicine, the past two years he has been at the Hillcrest Medical Center, Tulsa, Oklahoma. There he spent one year doing his internship and the other in surgery.

Besides the four generations of doctors, other members of the family are also in the medical profession. Although she is no longer active, **Mrs. Kolb, Sr.** is a qualified medical technologist. Mrs. Kolb, Jr. received her B.S. degree in Nursing in 1958 at the University of Arkansas School of Nursing.

Dr. Wayne Taylor at Rodman Clinic

Dr. T. N. Rodman of Leachville announced the association of **Dr. G. Wayne Taylor** in the operation of Rodman's hospital. Dr. Taylor is a graduate of Manila High School and did his pre-med work at Arkansas State College, Jonesboro. He was graduated from the University of Arkansas School of Medicine. He has just completed his internship at Baptist Memorial Hospital in Memphis where he did special work in radiology.

Doctor Robert White Assumes Practice of Dr. Douglas

Dr. Robert White began his practice as physician and surgeon in Malvern assuming the practice of **Dr. Jennings Douglas**. Dr. Douglas who began practice in Malvern in 1951 has accepted a resident position in dermatology of the University of Alabama Medical School Hospital in Birmingham.

Dr. White is a native of Siloam Springs and received his degree at the Arkansas Medical School; he interned at the Baptist Hospital in Little Rock.

Dr. J. P. Thompson Added To State Hospital Staff

Dr. John P. Thompson is a new psychiatric resident at the Little Rock Unit of the Arkansas State Hospital. **Dr. Granville L. Jones**, hospital superintendent announced the appointment.

Dr. Thompson is a native of Arkansas. He completed high school at Arkadelphia and obtained his BSM and MD degrees at the University of Arkansas Medical School. Before joining the staff of the State Hospital, he was engaged in private practice for 12 years in Bearden, Arkansas.

Dr. Thompson is a member of the American Medical Association, American Academy of General Practice, American Society of Clinical Hypnosis, Ouachita County and Arkansas State Medical Society.

Medical Office Opened

The Pulaski County Medical Society opened a new executive office at 510 Pulaski Street, Little Rock. The Society's growth and a planned expansion of its services required the establishment of the quarters. The office is also used for committee meetings of the Society, whose executive secretary is Paul Harris.

New Physician at Walnut Ridge

Dr. James H. Hickman located in Walnut Ridge for the practice of general medicine in August. Dr. Hickman has offices in a new building near Lawrence Memorial Hospital and south of the Medical Arts Building. A native of Searcy, Dr. Hickman graduated from the University of Arkansas Medical School and completed his internship at the University Hospital in Little Rock. He has just completed a year as resident surgeon at the Veteran's Administration Hospital in Little Rock.

Clinic Opened by

Drs. Howard & McMahan

The Howard-McMahan Clinic located in Fordyce was opened by **Dr. D. G. Howard** and **Dr. H. S. McMahan**. The building has been completely remodeled and redecorated with new equipment installed. Both doctors are graduates of the University of Arkansas School of Medicine and interned at Arkansas Baptist Hospital in Little

Rock. Dr. Howard is a native of England, Arkansas and Dr. McMahan is a native of Emerson, Arkansas.

Proceedings of Societies

STATEMENT OF THE PULASKI COUNTY MEDICAL SOCIETY*

Re: HR 4222, 87th Congress
King-Anderson Legislation
Before Committee on Ways and Means
United States House of Representatives

By

JOSEPH A. NORTON, M.D.

Mr. Chairman and Members
of the Committee:

The Pulaski County Medical Society in the State of Arkansas appreciates this opportunity to express views concerning HR 4222.

The Pulaski County Medical Society has 365 members, representing 73.2 per cent of the total Doctors of Medicine in our county, and 28.4 per cent of the total membership of the Arkansas Medical Society. Our Society was organized October 19, 1909. Our Society has consistently favored legislation and programs which it felt would better serve the medical needs of our citizens, regardless of age. I have appended to this report a listing of recent activities of our Society which substantiate this statement in greater detail.

The Pulaski County Medical Society has specifically concerned itself with medical care for the aged. With other interested groups, we have supported local implementation of the Kerr-Mills PL 86-78. Arkansas legislation has already been enacted, and will go into effect when funds are appropriated later in this year. Our members have given support and service to the units of the Arkansas State Hospital, the University of Arkansas Medical Center, and the three Cancer Clinics of the Arkansas Cancer Commission, all located in Pulaski County, and each dealing in great number with senior citizens. We have supported the contracts made with the Medical School and with approved hospitals in our County by the Depart-

*Testimony requested and authorized by the Arkansas Medical Society and the Pulaski County Medical Society.

FEATURES

ment of Public Welfare, providing hospital care and out-patient treatment for public assistance recipients and for other medically indigent persons. We also have supported the Nursing Care program authorized by State and Federal legislation, through working agreements with the 20 licensed nursing homes in Pulaski County. We have supported commercial insurance carriers in our area and have publicized and encouraged public use of the available prepayment medical care insurance plans for people over 65 years of age. We have supported and participated in the activities of many of our local organizations concerned with medical care for the aged, such as the Visiting Nurses Association and the Pulaski County Health and Welfare Council, with its Senior Citizens Activities Today group. Our County Society Committee on Aging has kept active liaison with these groups, and also has arranged for programs, speakers, and panels to discuss the medical problems and needs of Senior Citizens before local civic and church groups. Some of our Society members now are engaged in the formation of a private church-sponsored Home for the Aged in Pulaski County. Our Society was represented on the Arkansas Commission for the Aged, and at the White House Conference on Aging. We organized a Diabetes Detection Week and have set up weekly Tuberculosis Chest Conferences.

We are considering a plan, instituted last year by the St. Louis County Medical Society, Missouri, whereby a patient, regardless of age, who feels unable to meet the full cost of medical care, can apply, without charge, for a credit card, entitling him to a percentage reduction in fees from participating society members. Traditionally and historically, our Society members have reduced fees for those unable to meet the full cost of medical care. This plan is actually only a refinement of traditional practice. Our Society has supported a Doctors Exchange which provides in Pulaski County 24-hour medical care service to all. The Pulaski County Medical Society has publicly stated (see attached copy, Letter to the Editor, Arkansas Gazette, July, 1961) that the Society and its members guarantee medical care to all in our county, regardless of

financial, race, or other status. And where there might be complaint or misunderstanding about fees, services, or individual Society members, we have maintained a Board of Censors and Grievance Committee, both active and publicized, to hear and act on such matters.

The following statistics are of interest. The Pulaski County total population is 242,980 (1960). Of that total population, 25,728, or 10.6 per cent are over sixty-five years of age. A total of 8,611, or 33.4 per cent of the group over sixty-five years of age receive OASI benefits. A total of 4,000, or 15.5 per cent of the group over sixty-five years of age receive OAA. A total of 21,728, or 84.5 per cent are over sixty-five years of age and do not receive OAA. It is estimated that a total of 6,500, or 39.4 per cent of the group over sixty-five years of age will be reached by the new legislation implementing the Kerr-Mills law in our county. Also, there is good insurance coverage in that age group, as indicated by the fact that one company alone (Arkansas Blue Cross-Blue Shield) carries in Pulaski County 4,563 "over-65" policies.

We have two large local private hospitals. One carried an 81.3 per cent occupancy and the other an 85.7 occupancy in 1960. The Arkansas Hospital Advisory Council stated (1960) that Pulaski County has 82.9 per cent of the needed hospital beds, with a good quality of hospital care, and that the county has 88 per cent of the needed nursing home beds, with generally sub-standard quality in our nursing homes. Two other public hospitals are now in construction in our county—one in North Little Rock and one in Jacksonville. These will aid our bed situation.

These statistics are presented for information, and also to show that the Pulaski County Medical Society is aware of the problems and needs of medical care in our county. We are working with other local groups to meet those problems and needs.

Our Society has tried to keep abreast of ideas and actions in the area of medical care for the aged. We agree that there is a need for the best quality of medical care for our senior citizens. Traditionally, in offices and hospitals, we have tried to deliver that kind of medical care. We are happy that there is a rapid increase in the

number of senior citizens. We feel that the problems, the obligations, and the privileges of providing for these senior citizens sufficient jobs, homes, recreation, financial security, family and community love and acceptance, and medical care must be met promptly. We feel that those problems and needs should be met and solved locally—in each home, in each community, and in each state, and that the Federal Government should only step in with aid when the local efforts are unable to meet the needs and problems. We have tried to indicate ways in which we are aware of our own problems, and to indicate means by which we hope to solve them. We feel that their solution may require a cooperation of local, county, state, and federal agencies, but always with the emphasis on the local level.

These are some reasons why we of the Pulaski County Medical Society have supported the Kerr-Mills Law in our county. We beg that this committee use its influence to see that this law is allowed to be implemented over our entire country, and that it be given the fair trial which it deserves. Even proponents of HR 4222 have stated that the Kerr-Mills Law will be useful—we feel it may prove even more useful when coupled with private insurance and with more local effort than they dream of!

The Pulaski County Medical Society is opposed to the Anderson-King legislation. We have repeatedly, as a Society and as individual members, sent letters and telegrams to our Congressional delegation in Washington, stating our opposition to any legislation for expansion of Social Security to cover medical care. (See attached copies of telegrams, letters, and resolutions.) At home we are supported in our approval of the Kerr-Mills Law and in our opposition to the Anderson-King legislation by the Little Rock Chamber of Commerce, the Little Rock Junior Chamber of Commerce, and by other local organizations and private citizens. Allow me to list some reasons for our opposition to the Anderson-King legislation:

1. We oppose Social Security expansion in this area. We feel that such expansion will endanger the Social Security system, which, in its over twenty-five years of operation, has

become a vital factor in the economy of our country and of many of our citizens. Already there would seem to be some stubborn odds against the financial stability of the Social Security program, as it is now set up, what with people living longer and drawing more benefits for more years, with more categories of employment being added regularly, with retirement and disability ages being dropped regularly, and with the reserve dwindling regularly. How much more can be added? How much higher can this tax go?

2. We think the expense of such a program will be tremendous, and has not even yet been totally figured or partially understood by any of us. The experience of other countries would indicate that, while the true cost of such legislation is not even estimable, it would surely be so great as to seriously hamper other governmental functions. In the present state of international tension, with our defense and military needs, when billions of dollars of extra appropriation are needed, does it not seem a foolish course to embark on this kind of costly social experiment?
3. We are opposed to the bureaucracy that will be involved in such a program, knowing that an entirely new Governmental organization will have to be set up, from Washington down to each community, to deal with individual hospitals, councils, nursing homes, nurses, etc. We, from our experience in Medicare, in governmental Armed Service duties, and in other governmental contacts, cannot see any good in such a system diluted by myriads of unnecessary controls, and by millions of typed copies of orders, decisions, re-evaluations, reports, red-tape, etc.
4. We feel that such legislation is a definite step towards a complete compulsory federal medical system for all citizens, regardless of age or of ability or desire to care for themselves. We are not interested in whether it is called "socialized" or

FEATURES

"federal" or "governmental" medicine. We still feel that such a system of so-called "free" medical care will lead to overuse and abuse of the medical facilities by creating a hypochondriac's holiday each day; will lower the quality of medical, nursing, and hospital care generally; will make health care a routine governmental procedure instead of the human individual concern it now is; will stifle the incentive and initiative of local individual and group efforts to ease the problems of the aged, of private insurance companies who are now being stimulated to offer more and better "over 65" policies on a free, competitive basis; and finally, and of most importance, will stifle the incentive and initiative of county, local and state governmental units in this field, carrying us far along the road to the destruction of our Federal republic system.

5. We sincerely believe that the majority of the physicians in the United States abhor this approach to medical care. At the AMA meeting in July, 1961, our representatives made the statement that the physicians of this country would not be willing partners to such a project as the Anderson-King legislation proposes. We respectfully question the logic and the wisdom of legislation which we feel is not needed, is not most appropriate to the problem, and which is opposed by the majority of those physicians who are the final vendors of medical care in this country.
6. We have many other areas of opposition to this legislation, but, in the interest of brevity, this final thought. We feel that the American people, when alerted, will still prefer their medical care on a private, competitive, free enterprise basis, with its individual responsibility, its individual freedom, and with local concern in matters of their personal health. This is the system which has inspired us to the long training to be practitioners of medicine in our country. This is the system which

has brought to our American people the best medical care in the world.

For myself and for the Pulaski County Medical Society, may I thank you again for this opportunity to express opposition to HR 4222 and to any similar legislation, and also, to express our thanks and our support for the Kerr-Mills Law, which your committee showed the wisdom to recommend and which the Congress showed the wisdom to adopt in 1960.

Statement of

R. B. ROBINS, M.D.

Presented to the Committee on
Ways and Means
House of Representatives

Mr. Chairman and Members
of the Committee:

I am Dr. R. B. Robins, a family physician from Camden, Arkansas. My good personal friend, Chairman Wilbur Mills, knows that I have a great interest in the question of medical care under federal sponsorship and control. As a physician and as a citizen who has been active in governmental and political affairs (I served from 1944 to 1952 as the Democratic National Committeeman from the State of Arkansas), I feel justified in appearing here today to present my views with respect to HR 4222.

I have opposed in the past the Truman health program and the Forand legislation. Now you are considering the King-Anderson bill. They are all part and parcel of the same thing—programs providing for or leading to a system of government dominated medical practice.

You may recall that I testified before this Committee two years ago, against the Forand bill. I had then just returned from England where I had the opportunity of studying, first hand, the British National Health Service. I stated then the faults and dangers which are inherent in a national health system, and I say to you now that my many contacts with friends in England confirm my conclusions that the British system becomes more and more distasteful to the people—the patients *and* the physicians.

The British National Health Service, now 13 years old, is still being plagued with rising costs, greater inconveniences,

FEATURES

increasing governmental red tape and a diminishing quality of medical care. It is no wonder, then, that more and more doctors from England seek to establish themselves in the United States. It is no wonder, then, that more and more physicians in England are sending their sons to study medicine in this country. It is no wonder, then, that more and more British people are seeking private care at their own expense in lieu of the public care to which they contribute through tax payments.

The experience of Great Britain in attempting to estimate the cost of the National Health Service at its inception and our experience in estimating costs of our social security programs indicate to me that it is extremely likely that the real cost of the program proposed by HR 4222 will greatly exceed initial estimates.

In a concise examination of the British National Health Service, Professor John Jewkes, who occupies the Chair of Economic Organization in the University of Oxford, writes in his recently published work, "The Genesis of the British National Health Service,"

"It is equally clear that the government was taken by surprise at the high level of demand under the new conditions. No estimate made before 1948 had set the annual cost to the Exchequer of the National Health Service above 170 million pounds. The cost at an annual rate came out at 377 million pounds for 1948-49 and 433 million pounds for 1949-1950."

Dr. Jewkes relates the difficulties encountered by the government in its attempt to hold the cost line and of these attempts says:

"The steady and continuous struggle on the part of British governments to restrain the demands for medical service has led those—who had assumed that the principle of 'the best possible medical service free for all' meant literally what it said and did not mean 'the distribution roughly according to the principle of first come first served of the supply of free medical services which the government thought adequate'—to complain of the 'tyranny of the Exchequer.' Certainly the efforts on the part of successive governments to keep expenditures within what were deemed to be proper bounds, and at the same time avoid political unpopularity,

have had some unfortunate long period consequences."

Our nation's medical societies oppose HR 4222. They represent the overwhelming majority of practicing physicians in the United States. While the task force report made to President Kennedy on health and social security for the American people urged federal action to increase the supply of medical and other health personnel, even consideration of bills such as you have before you, in my opinion, are today influencing young men against entering the private practice of medicine.

We doctors have strongly supported Kerr-Mills legislation. I know that by now you have heard repeated testimony on this subject. The proponents of HR 4222 have labeled this legislation (Kerr-Mills) inadequate or degrading.

But "catch terms" do not establish the value of any law. Kerr-Mills fills the gap between those who can well afford to pay for their health care, as they pay for everything else, and those who are unable to pay for such care and of necessity must seek public aid.

May I ask this Committee to deliberate with caution.

Favorable action of HR 4222 will be irrevocable. The growth of private insurance, the value of Kerr-Mills, the unknown costs, the dangers of federally-regulated medicine must be carefully considered. This is not a political question! Certain groups, while condemning medical societies for their interest and their activity in education of their members and presenting their views to the public, have themselves been using medical care for the aged as the instrument for organizing our elder citizens into a political block.

These organizations are far more interested in using these groups in political campaigns than they are in the welfare of the aged or of the rest of us. May I say also that some appointed officers of our government seem to be forgetting their responsibilities to all the people and have joined in the organizing and lobbying activities of these special interest groups.

Mr. chairman and gentlemen of the Committee, I want to thank you for allowing me to again express my sentiments. May I also request that my oral and writ-

FEATURES

ten statements given two years ago to your Committee be reinserted in the record. I believe them to be pertinent to your consideration of HR 4222.

Statement of
CONGRESSMAN DALE ALFORD
Before House Ways and Means
Committee

Mr. Chairman and Members
of the Committee:

I am extremely grateful to you for this opportunity of being heard during these singularly important hearings. I have asked for this courtesy because I feel strongly that the bill you are considering is of unusual significance.

In my view, HR 4222 is a measure cunningly devised for fishing in troubled waters. The bait is humanitarianism; the hook is loss of freedom.

I say this as a physician, whose liberty to practice medicine freely is at stake. I say it also as a citizen elected to this House of Representatives. From both viewpoints, I urge the Committee to reject this bill.

By now you have heard many representatives of my profession testify to the damage this legislation could inflict upon the world's finest system of medical care. They are the nation's experts on health, uniquely qualified to speak on matters affecting health. And from what I have read of their testimony, I can only add my fervent "Amen" to the case they have made.

I shall therefore talk, not as a doctor, but as a member of Congress deeply concerned with many of the bill's other aspects.

To begin with, we don't need it. Last year the 86th Congress voted the Mills-Kerr Law into effect. Its implementation has been remarkable, and its potential for helping those of the aged who need help is unlimited. On this count alone HR 4222 is unnecessary.

But there are other reasons of which the Committee is well aware. There are existing welfare programs; there are the unremunerated efforts of responsible men and women, working together within their communities to help solve the problems of the aged; and there is the magnificent record of the insurance and prepayment

plans, which now protect 132 million Americans, cover more than half the aged, and provide an effective, expanding method of cushioning the costs of illness.

Surveys also show us that the majority of our older people are self-sustaining financially, and that their health is generally good for their years.

Why, then, does HR 4222 propose a compulsory national health plan for those receiving retirement benefits under OASDI? To me, the answer seems plain:

This proposal was designed to set precedents—not to help people.

Its sole purpose is to introduce the large foot of the Federal Government into the door of freely practiced medicine.

I cannot believe, Mr. Chairman, that a bill of such suspiciously limited benefits and such avowedly modest ambitions is seriously proposed as the be-all, end-all solution to financing health care for the aged. Those who support it admit as much, for in rare moments of candor they point out the measure's inadequacies and add: "This is just a beginning."

We are all aware that a philosophical battle rages in the United States between those who wish to cede more and more territory to the Federal Government, and those who believe we have already yielded more ground than we should. I suggest that the debate over Social Security medicine for the aged is simply a single skirmish in that continuing battle.

But I predict that this skirmish will become the rallying point at which the American people will pause to fight the matter out, for there is a growing realization that further retreat would be the prelude to disaster.

This is a generous nation—perhaps the most generous in the world's history. Its people will dig deep into their pockets to help their neighbors. They are ready with the helping hand when it is needed, and easy-going when honest mistakes are made. But when they're riled, they're the toughest people on earth, and I think they're now beginning to get riled at the waste of their tax dollars.

The distinguished chairman of this Committee is properly recognized as an outstanding authority on fiscal matters. I cannot claim a fraction of his knowledge or experience in this field.

But I submit that there is a limit to the amount of money the taxpayer can and will pay, and that we are approaching that limit right now. We have already bequeathed a mountainous stack of IOU's to our children and grandchildren, and it is doubtful if they will appreciate the inheritance.

Yet HR 4222 proposes that we run up an even larger tab and send the bill to future generations. This measure would simply raise Social Security taxes, ask young working people and their descendants to pay them in perpetuity, and earmark the money for the help of millions of older people who don't need help.

It is one thing to help a neighbor in need, Mr. Chairman. It is another thing to ask a young worker to help everybody 65 or older simply because he has retired and receives benefit under Social Security.

The people who will bear the brunt of this tax increase are already making the buffalo scream. They have children to feed and clothe and house. They have doctor bills and insurance premiums and mortgages and college educations to pay for. They have taxes to pay—or else. All any member of this Committee needs to do is watch the struggle of his younger constituents the next time he returns to his district. He will quickly observe that few young couples get very far ahead of the game.

Why should they be asked, then, to pay the hospital bill for a man who may, for all this measure has to say about it, be a coupon-clipping millionaire living the life of Riley?

Do I overstate the case?

Consider, Mr. Chairman, a single provision of the bill. HR 4222 provides that a person over 65, still at work, would be entitled to coverage for health purposes.

Not having retired, this person is presumably as able to pay his own medical bills as he was at 50, or 40, or 30. Does it make sense to hand him unsolicited health services at the expense of a younger worker?

I suggest that it does not. And I suggest that the Committee consider carefully the justice of increasing Social Security taxes by 17 per cent in order to provide medical benefits for millions of

the aged who are able and willing to pay their own way.

I say the tax would be increased by 17 per cent. I should amend that statement. The tax would be increased by 17 per cent *for the time being*. For it would go up as surely as day follows night as the program increased benefits, expanded coverage, and embraced an ever-enlarging number of older people.

In conclusion, Mr. Chairman, I am unwilling to believe that the traditional virtues of self-reliance, initiative, independence and thrift have disappeared from the American scene. Those virtues helped build this country, and they die hard. But die they will if the Federal Government sees its function as the ultimate provision of a welfare state extending from cradle to grave.

If our native virtues disappear, Mr. Chairman, there will be little left of our nation worth preserving, and we shall fall easy prey to enemies from within or without. History is filled with examples, but I should like to quote only one. These are the words of William Shirer, in his book entitled "The Rise and Fall of the Third Reich":

"Bismarck put through between 1883 and 1889 a program for social security far beyond anything known in other countries. It included compulsory insurance for workers against old age, sickness, accident and incapacity, and though organized by the State it was financed by employers and employees. It cannot be said that it stopped the rise of the Social Democrats or the trade unions, but it did have a profound effect on the working class in that it gradually made them value security over political freedom and caused them to see in the State, however conservative, a benefactor and protector. Hitler . . . took full advantage of this state of mind. In this, as in other matters, he learned much from Bismarck. 'I studied Bismarck's socialist legislation,' Hitler remarks in *Mein Kampf*, 'in its intention, struggle, and success.'"

Let us hope, Mr. Chairman, that we in America never set security over political freedom.

And let us always remember that the Federal Government is the creature of the people, and that the people are not, and

FEATURES

never must become, the creatures of the Federal Government.

I thank the Committee for granting me this opportunity to appear.

Contributions to the American Medical Education Foundation from the State of Arkansas During the Month of June 1961:

Arthur P. Allison, Little Rock	\$ 2.00
George C. Burton, El Dorado	5.00
Alan G. Cazort, Little Rock	6.25
Eldon L. Caffery, Jonesboro	50.00
Edward M. Cooper, Jonesboro	25.00
John W. Dodson, Jr., Hot Springs	10.00
Thos. M. Durham, Jr., Hot Springs	25.00
Guy R. Farris, Little Rock	25.00
Alfred H. Hathcock, Batesville	10.00
Bill F. Hefley, Little Rock	6.25
C. L. Hyatt, Monticello	25.00
Bryant W. Jones, Little Rock	10.00
Morris Jackson, Little Rock	10.00
Thomas G. Johnston, Little Rock	6.25
Willie J. Lee, Stamps	10.00
Porter R. Rodgers, Searcy	25.00
Purcell Smith, Jr., Little Rock	6.25
Robert J. Thompson, Fort Smith	10.00
Ernest L. Wilbur, Little Rock	25.00
Joseph P. Ward, Little Rock	10.00
Mrs. Guy R. Farris, Little Rock	10.00
Mrs. C. C. Long, Ozark	2.50
	<hr/>
	\$314.50

Contributors to the American Medical Education Foundation from the State of Arkansas During the Month of July 1961:

Dr. Lloyd L. Barta, Fort Smith	\$ 25.00
Dr. Jean C. Gladden, Harrison	50.00
Dr. Joseph A. Norton, Little Rock	25.00

New Members . . .

Dr. William Sexton Lewis is a new member of the Pulaski County Medical Society. He is a native of Strong, Arkansas; he received his preliminary education at Louisiana Polytechnic Institute, and was graduated from the University of Arkansas School of Medicine in 1956. His specialty is internal medicine. Dr. Lewis now holds the position of instructor at

the University of Arkansas School of Medicine, Medicine Department.

The Pulaski County Medical Society announces that **Dr. George K. Mitchell** has been added to its roster of members. A native of Sheridan, Arkansas, he attended Hendrix College at Conway, Arkansas and received his M.D. degree from the University of Arkansas Medical School in 1956. His specialty is internal medicine and he is an instructor in the Department of Medicine, University of Arkansas School of Medicine.

A new member of the Clark County Medical Society is **Dr. John W. Balay**. He is a native of Joplin, Missouri, and received his preliminary education at the University of Arkansas. His M.D. degree was obtained from the University of Arkansas Medical School in 1957. Dr. Balay served three years in the U. S. Navy and he is now associated with Dr. J. W. Kennedy in Arkadelphia. Dr. Balay is a General Practitioner.

Dr. James H. Hickman has been accepted for membership in the Lawrence County Medical Society. A native of Searcy, Arkansas, Dr. Hickman received his preliminary education at Harding College at Searcy, and was graduated from the University of Arkansas School of Medicine in 1959. He is a member of the medical staff at Lawrence Memorial Hospital. Dr. Hickman is a general practitioner and surgeon with his office at Highway 25 West, Walnut Ridge, Arkansas.

A new member of the Miller County Medical Society is **Dr. Lloyd Edwin Gary**. He is a native of Eupora, Mississippi, and received his preliminary education at the University of Mississippi at Eupora, Mississippi, from which he received a B.A. degree. He was graduated from Tulane University and received his M.D. degree in 1955. He has practiced for two years in the military service at U. S. Naval Hospital, Beaufort, South Carolina. Dr. Gary's specialty is obstetrics and gynecology and his office is located at 619 Main Street, Texarkana, Texas.

Woman's Auxiliary

Mrs. Mason G. Lawson, wife of the director of the Little Rock Health Department, has been appointed field representative for women's organizations of the American Medical Association.

The work involves considerable travel but Mrs. Lawson will not change her Little Rock residence. She joined the staff in mid-June.

A former president of the AMA Women's Auxiliary, Mrs. Lawson has long been active in the AMA, state and county medical auxiliaries and in various other state and national organizations of a medical nature.

She also has been president of the Arkansas Medical Society Auxiliary and of two county auxiliaries. She has been a member of the AMA Auxiliary Board of Directors since 1949.

Medical Auxiliary Style Show

"Fashion Forecast: A Family Affair" was the theme of the style show that was sponsored by the Medical Auxiliary to the Saline County Medical Society. The style show was given at the high school. It was a benefit show for the education fund of the Auxiliary.

This fund gives aid to student nurses, medical students and the American Medical Educational Fund. This show's fashions were furnished by the Gingles Stores and was different from most fashion shows in that it had appeal for all the family.

There were over 70 models who presented fashions from size 3 on through the fashionable forties. The models were children, teen-agers, men and women. Door prizes were given.

Book Reviews

PATHOLOGICAL PHYSIOLOGY, Mechanisms of Disease, Third Edition, Edited by William A. Sodeman, M.D., Sc.D., F.A.C.P., Dean and Professor of Medicine, Jefferson Medical College, pp. 1182, published by W. B. Saunders Company, Philadelphia and London, 1961.

This is an exceptionally interesting book from the very beginning. It is written by various authors and starts with an interesting discussion by Dr. Benjamin R. Gendel on Genetics and Disease. The sections on nutritional factors and water metabolism endocrine glands are well written and discussed. The various systems of the body and their pathologic states are discussed in light of physiology in other chapters. There is a short chapter on Agents of Disease. In the reviewer's opinion this could have been somewhat lengthier but this is a matter of opinion. This book is exceedingly well written and in a large measure succeeds in relating alterations in the physiologic mechanisms of the body to the pathologic processes which precipitate the alteration. This is interesting reading for any physician. It is heartily recommended. AK

BIOCHEMISTRY OF HUMAN GENETICS, edited by G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P. and Cecilia M. O'Connor, B.Sc., pp. 347, illustrated, published by Little, Brown & Company, Boston Massachusetts, 1960.

The recent Nobel prize awards have focused a great deal of attention on genetics. This CIBA Foundation Symposium is exceedingly well written by outstanding authorities in the field. There is an excellent discussion of some of the hereditary conditions as Galactosaemia. There is a discussion of Primaquine sensitivity. The genetic aspects of hemoglobin are discussed. This book is not of outstanding interest to the practicing physician; on the other hand, every internist will find a great deal of interest in this field. AK

DRIPPS, ECKENHOFF AND VANDAM—INTRODUCTION TO ANESTHESIA. An ideal basic guide to the understanding and safe administration of anesthesia.

CORDAY AND IRVING—DISTURBANCES OF HEART RATE, RHYTHM AND CONDUCTION Covers management of ALL the cardiac arrhythmias and conduction defects.

TUBERCULOSIS ABSTRACTS

Sponsored by
The Arkansas Tuberculosis Association

RECURRENT ASIAN INFLUENZA IN AN INDUSTRIAL POPULATION

Vaccination is the only way to protect workers against influenza, which can severely handicap an industrial group during an epidemic. Less absenteeism was found among vaccinated employees than among those not vaccinated in the study reported. NEILL K. WEAVER, M.D.; JOHN G. LIONE, M.D.; AND WILLIAM J. MOGABGAB, M.D., *Annals of Internal Medicine*, May, 1961.

An epidemic of influenza may disable a significant number of workers in an industrial plant and seriously curtail its opera-

FEATURES

tion. At present, vaccination offers the only means of offsetting these consequences.

In the winter of 1960, an outbreak of Asian influenza recurred in an industrial population which had been affected by the 1957-58 epidemic. Since the employees of the plant were subjects of an acute respiratory disease study which encompassed both epidemics, an opportunity was provided for the derivation of clinical, laboratory, and epidemiologic information on Asian influenza.

PROCEDURE

From July, 1957, through the spring of 1960, data on acute respiratory illnesses were gathered from employees of a large oil refinery and petrochemical plant located in Baton Rouge, La. The plant has an average population of approximately 6,200 employees residing in Baton Rouge or nearby communities. The workers' age range was 20 to 65 years, the average being 46. Females constituted less than 5 per cent of the employees and were excluded from the study. Approximately 29 per cent of the male workers were salaried, 43 per cent were maintenance, and 28 per cent were production wage earners.

Historical and clinical information on all respiratory illnesses in 1,000 of these employees was collected. Standard criteria for the clinical diagnosis of influenza included: fever above 100.4°F., prominent malaise or muscular aches, and associated upper respiratory symptoms. An interview between a plant physician and each patient served to corroborate and classify the information in retrospect.

Garglings were obtained for laboratory studies; serologic determinations were done, and antibody was titrated by hemagglutination-inhibition.

VACCINATION

Standard influenza vaccine containing inactivated influenza viruses was obtained from commercial sources in September of each year. Vaccine was offered to employees each fall and winter of the three-year period. In the 1957-58 period, 65 per cent of the workers received a single injection of monovalent Asian influenza vaccine and 34 per cent received a second injection six weeks after the first. The following year 13 per cent of the workers received a single

injection of polyvalent influenza vaccine and 30 per cent received two injections. In October, 1959, a single injection of polyvalent influenza vaccine was given subcutaneously to 32 per cent of employees. Information regarding the vaccine was coded, thus physicians in recording clinical observations did not know the vaccine status of an individual.

Six hundred cases of typical influenza from the 1960 outbreak were matched with 600 individuals free of significant respiratory disease during the epidemic period with respect to age, service, and job assignment.

ATTACK RATES

Relatively high attack rates (above 14 per 1,000 per month) were maintained from September, 1957, through February, 1958. The over-all case rate for the period was 186 per 1,000. From September, 1958, through March, 1959, only 21 cases of influenza-like illnesses were recorded. Such illnesses were rarely observed in workers during the fall of 1959, but in January, 1960, a sharp outbreak occurred, with a peak of 78 cases per 1,000 employees in February. The over-all attack rate during the third period was 109 per 1,000, virtually all cases occurring during an eight-week period from mid-January to mid-March.

Although patients observed during the influenza epidemics exhibited a variety of disease patterns, a picture considered characteristic of "clinical influenza" was readily recognized: an illness of abrupt onset with fever, chills, respiratory tract involvement, and striking constitutional symptoms of headache, muscular aches, and malaise.

Sickness absenteeism of the plant workers was strictly accounted for, and the accuracy of medical department tabulations was checked against payroll figures.

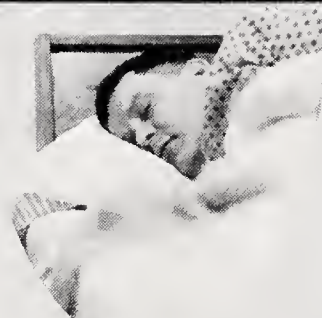
Employees vaccinated prior to each epidemic experienced fewer cases of influenza and lower disability absenteeism than unvaccinated workers. In 1957-58, the influenza attack rate was 313 in unvaccinated and 123 in vaccinated workers, a reduction of 60 per cent. In the 1960 epidemic, the corresponding rates were 114 and 93, a reduction of 20 per cent. Overall absenteeism due to acute respiratory disease was lower in the vaccinated group by 45 per cent in 1957-58, and by 30 per cent in 1960, while

NEW
B. I. D.
DOSAGE



*only one
lasts all night*

*only one
lasts all day*



PRO-BANTHINE P.A.[®]

(BRAND OF PROPANTHELINE BROMIDE)

PROLONGED-ACTING TABLETS—30 mg. Effective • Convenient • Sustained Action

PRO-BANTHINE[®], the leading anticholinergic, is now available in a distinctive prolonged-acting dosage form.

The prolonged action of new PRO-BANTHINE P.A. is regulated by simple physical solubility. Each PRO-BANTHINE P.A. tablet releases about half of its 30 mg. promptly to establish the usual therapeutic dosage level. The remainder is released at a rate designed to compensate for the metabolic inactivation of earlier increments.

This regulated therapeutic continuity maintains the dependable anticholinergic activity of PRO-BANTHINE all day and all night with only two tablets daily in most patients.

New PRO-BANTHINE P.A. will be of particular benefit in controlling acid secretion, pain and discomfort both day and night in ulcer patients and in inhibiting excess acidity and motility in patients with peptic ulcer, gastritis, pylorospasm, biliary dyskinesia and functional gastrointestinal disorders.

Suggested Adult Dosage: One tablet at bedtime and one in the morning, supplemented, if necessary, by additional tablets of PRO-BANTHINE P.A. or standard PRO-BANTHINE to meet individual requirements.

G. D. SEARLE & CO.

CHICAGO 80, ILLINOIS

Research in the Service of Medicine

reductions in absences attributed to influenza were 65 per cent and 27 per cent, respectively.

FURTHER STUDY NEEDED

The clinical observations suggest that immunity may have been declining four months after vaccine injection. This interpretation is supported by failure of the statistical analysis to demonstrate any evidence of vaccine protection being carried over from one year to the next. There would seem to be need for further study regarding the optimal dose and route, and time of administration of polyvalent influenza vaccine. It is possible that a regimen of two

0.5 ml. doses (250 CCA units each) spaced more widely apart (September and December) might afford equal or better protection with fewer reactions than the vaccine schedule conventionally recommended.

Analysis of the cases of influenza that occurred in 1960 revealed no evidence of immunity due to a previous episode of the disease or to vaccination unless the latter had been administered in the epidemic year. It seems less likely that this will recur a third time, at least in such proportions, since antibody levels appear to be increasing progressively.

ANSWER TO WHAT'S YOUR DIAGNOSIS?

67-year-old white male

The patient developed severe chest pain and sudden dyspnea on the night of admission. Electrocardiogram showed an old anterior myocardial infarct with evidence of fresh myocardial damage.

DIAGNOSIS: Acute pulmonary edema associated with an acute myocardial infarction.

X-RAY FEATURES: There is a diffuse type of infiltrate characteristic of edema principally in the medial portions of both lungs. The lack of appreciable cardiac enlargement is fairly typical of the situation in an acute infarction with acute left heart failure, resulting in the edema.

CORRECTION

An item in the July issue of the Journal announcing that Dr. John F. Guenthner of Mountain Home had been accepted for membership in the Society stated that he was graduated from the Kansas City College of Medicine and Surgery in 1924. Dr. Guenthner attended the Kansas City College of Medicine from November of 1924 until August 1926. He attended the American Medical University from August 1926 to June 1928 and received his M.D. degree from that University.

THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

November, 1961

Vol. 58 No. 6

FORT SMITH, ARK.

U.C. MEDICAL CENTER LIBRARY

NOV 27 1961

San Francisco, 22

86th ANNUAL SESSION
ARKANSAS MEDICAL SOCIETY

HOT SPRINGS

APRIL 29—MAY 2, 1962

which curve is longer?



Fascinating . . . how one curved figure seems to be longer than the other—even when you know they're both the same.

Two oral penicillins can be just as difficult to compare. If only the price of the drugs were to be considered, the choice would be clear. But isn't it what a drug *does* that counts?

V-Cillin K[®] achieves two to five times the serum levels of antibacterial activity (ABA) produced by oral penicillin G.¹ Moreover, it is highly stable in gastric acid and, therefore, more completely absorbed *even in the presence of food*. Your patient gets more dependable therapy for his money . . . and it's therapy—not tablets—he needs.



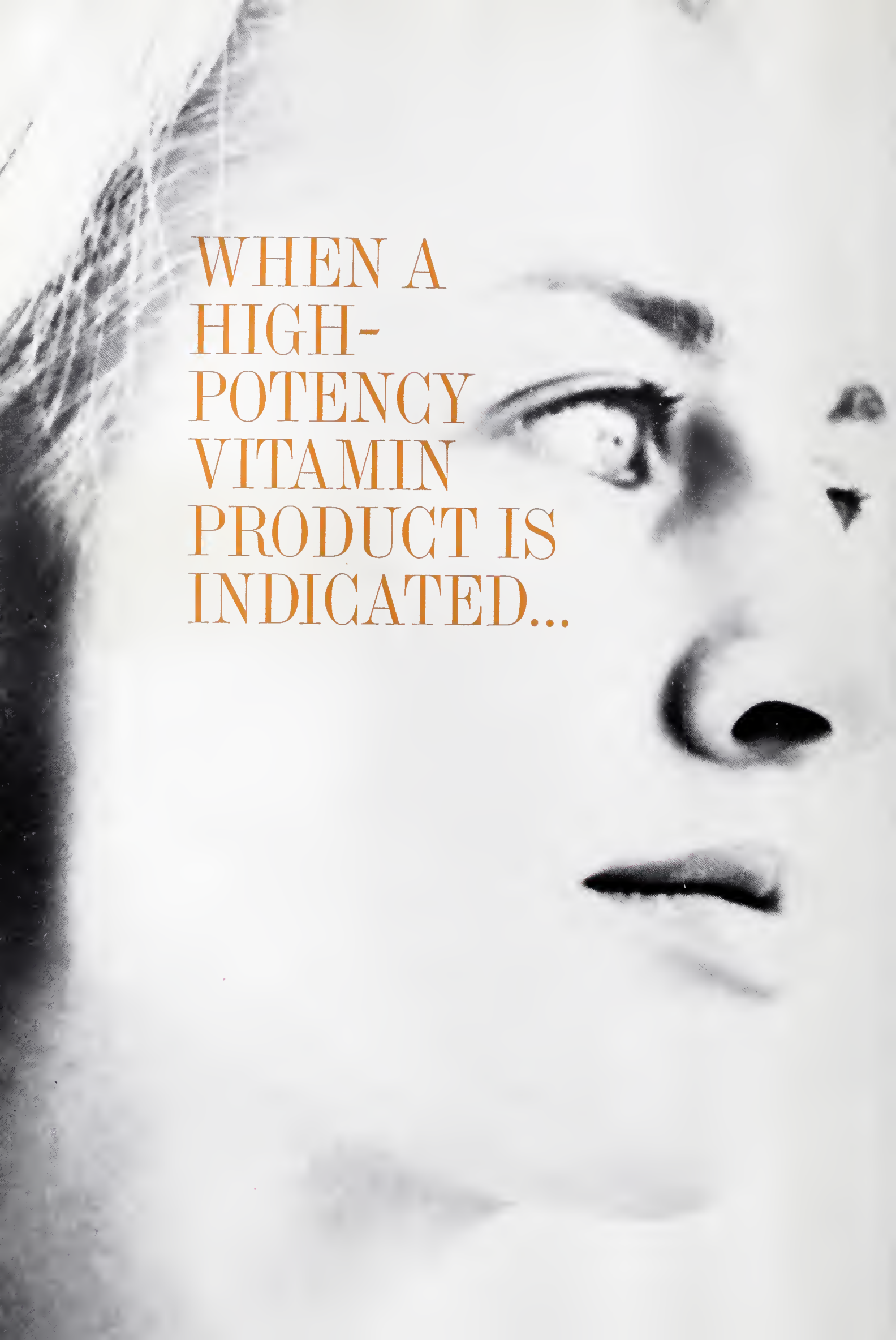
For consistently dependable clinical results

prescribe V-Cillin K in scored tablets of 125 and 250 mg. V-Cillin K, Pediatric, in 40 and 80-cc.-size packages. Each 5 cc. (approximately one teaspoonful) contain 125 mg. (200,000 units) penicillin V as the crystalline potassium salt.

V-Cillin K[®] (penicillin V potassium, Lilly)
1. Griffith, R. S.: Antibiotic Med. & Clin. Therapy, 7:129, 1960.

Product brochure available; write Eli Lilly and Company, Indianapolis 6, Indiana.

133287



WHEN A
HIGH-
POTENCY
VITAMIN
PRODUCT IS
INDICATED...

MYADEC[®]

high-potency vitamin formula with minerals

- helps to prevent or correct certain vitamin deficiencies
- supplies various minerals normally present in body tissue

Each MYADEC Capsule provides: *Vitamins*: Vitamin B₁₂ crystalline—5 mcg.; Vitamin B₂ (riboflavin)—10 mg.; Vitamin B₆ (pyridoxine hydrochloride)—2 mg.; Vitamin B₁ mononitrate—10 mg.; Nicotinamide (niacinamide)—100 mg.; Vitamin C (ascorbic acid)—150 mg.; Vitamin A—25,000 units (7.5 mg.); Vitamin D—1,000 units (25 mcg.); Vitamin E (*d*-alpha-tocopheryl acetate concentrate)—5 I.U.; *Minerals* (as inorganic salts): Iodine—0.15 mg.; Manganese—1 mg.; Cobalt—0.1 mg.; Potassium—5 mg.; Molybdenum—0.2 mg.; Iron—15 mg.; Copper—1 mg.; Zinc—1.5 mg.; Magnesium—6 mg.; Calcium—105 mg.; Phosphorus—80 mg.

Supplied: Bottles of 30, 100, and 250.

PARKE-DAVIS

66461

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

THE *Journal* OF THE *Arkansas* *Medical Society*

Owned by
THE ARKANSAS MEDICAL SOCIETY
And Published Under Direction of the Council

ALFRED KAHN, JR., M.D., Editor
1300 West Sixth Street Little Rock, Arkansas
MR. PAUL C. SCHAEFER, Business Manager
218 Kelley Bldg. Fort Smith, Arkansas
LITTLE ROCK BUSINESS OFFICE
114 E. Second St. Little Rock, Arkansas

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY
WM. A. SNODGRASS, JR.—President..... Little Rock
H. KING WADE, JR., President-Elect..... Hot Springs
M. E. BLANTON, First Vice-President..... Jonesboro
CHARLES W. REID, Second Vice-President..... Pine Bluff
L. E. DREWREY, Third Vice-President..... Camden
H. ELVIN SHUFFIELD, Secretary..... Little Rock
W. R. BROOKSHER, Secretary Emeritus..... Fort Smith
BEN N. SALTZMAN, Treasurer..... Mountain Home
C. LEWIS HYATT, Speaker, House of Delegates, Monticello
J. P. PRICE, JR., Vice Speaker,
House of Delegates..... Monticello
MR. PAUL C. SCHAEFER, Executive Secretary,
P. O. Box 1345..... Fort Smith

COUNCILORS

First District	JOE VERSER.....	Harrisburg
	ELDON FAIRLEY.....	Osceola
Second District	HUGH R. EDWARDS.....	Searcy
	PAUL GRAY.....	Batesville
Third District	K. E. BEATON.....	Wynne
	FRED B. STONE.....	Stuttgart
Fourth District	H. W. THOMAS.....	Dermott
	T. E. TOWNSEND.....	Pine Bluff
Fifth District	J. L. DEDMAN.....	Camden
	GEORGE C. BURTON.....	El Dorado
Sixth District	JOHN P. WOOD.....	Mena
	KARLTON H. KEMP.....	Texarkana
Seventh District	MARTIN EISELE.....	Hot Springs
	J. W. KENNEDY.....	Arkadelphia
Eighth District	ROBERT D. JONES.....	Little Rock
	BILL DAVE STEWART.....	Little Rock
Ninth District	ROSS FOWLER.....	Harrison
	STANLEY APPLIGATE.....	Springdale
Tenth District	L. A. WHITTAKER.....	Fort Smith
	C. C. LONG.....	Ozark

The Advertising policy of this JOURNAL is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

EXCLUSIVE PUBLICATION — Articles are accepted for publication on the condition that they are contributed solely to this JOURNAL.

COPYRIGHT 1961—By The JOURNAL of the Arkansas Medical Society.

NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to the membership.

● SCIENTIFIC ARTICLES

Psychopharmacology and
Psychiatry 223
Robert H. Felix, M.D.

The Phobic Syndrome
Its Nature and Treatment 230
By William B. Terhune, M.D.

Legal Problems Involving
Medical Records 237
Eugene R. Warren

● WHAT'S NEW

A Service for Your
Blind Patients 239
J. B. Cross, M.D.

● TEACHING SEMINAR

Acne Vulgaris..... 241
*Calvin J. Dillaha, M.D. and
G. Thomas Jansen, M.D.*

● FEATURES

What Is Your Diagnosis..... 244

Public Health at a Glance..... 245

Editorial: Chronic
Ulcerative Colitis 247
Alfred Kahn, Jr., M.D.

Medicine in the News..... 248

Announcements 255

Obituary 255

Personal and News Items..... 256

Proceedings of Societies..... 257

New Members 259

Woman's Auxiliary 260

Book Reviews 260

Tuberculosis Abstracts 261

Notice on Form 3579-P to be sent to Arkansas Medical Society, 218 Kelley Building, Fort Smith, Arkansas. Published monthly under direction of the Council, Arkansas Medical Society, Vol. 58, No. 6. Subscriptions \$3.00 a year. Single copies 50 cents. Entered as a second class matter, May 1, 1955, at the post office at Little Rock, Arkansas, under the Act of Congress of March, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 1, 1918. Second-class postage paid at Little Rock, Arkansas.

The JOURNAL

OF THE ARKANSAS MEDICAL SOCIETY

PUBLISHED MONTHLY UNDER DIRECTION OF THE COUNCIL

Volume 58

NOVEMBER, 1961

Number 6

Psychopharmacology and Psychiatry*

ROBERT H. FELIX, M.D.**

I am pleased and honored to be here and to participate in your Annual Institute in Psychiatry and Neurology. The topic I have chosen to consider with you is the impact of the relatively new field of psychopharmacology on psychiatry, with particular emphasis on the clinical and public health aspects of this impact.

Concurrent with the advent of pharmacotherapy there have been extremely significant changes in the patterns of care of the mentally ill. One phenomenon which has been influenced by the psychopharmacologic drugs has been the drop in resident mental hospital populations. For the past 5 years, reversing a trend of almost a century's duration, these populations have continued to decline. Between 1955 and 1960, resident patients decreased from 558,922 to 535,269, a drop of 28,653 or 4.2 percent. This amounts to an average annual decrease of 0.8 percent. However, if we take the resident population that had been projected for 1960 on the basis of data for the period from 1945 to 1955, we find that the actual population was 86,901 less than the projected figure of 622,170—or a drop of 14 percent. And this drop occurred despite the increases in the total number of admissions to mental hospitals during the same period.

The new drugs have played a significant role in the profound changes in the structure and administration of the mental hospital itself, as well as in the wider utilization of new types of community treatment. The pervasive in-

fluence of drugs in the hospital environment is highlighted by a study of the release rates among patients admitted to Saint Elizabeths Hospital during the period from January 1, 1953 through August 31, 1956. Patients hospitalized during 1955-1956, whether or not they were treated with chlorpromazine or reserpine, the two drugs being used at that time, were more likely to be released to the community than patients hospitalized before the use of drugs in 1953. During the years studied, there were no changes in diagnostic categories, symptomatology, or previous social histories of patients entering the hospital.

The investigator who carried out this study theorized that the increasingly optimistic expectation of staff that patients would recover—perhaps because of the successful treatment of chronic patients—increased the probability that all patients, whether or not treated with drugs, would recover. The most striking increases in release rates, incidentally, were among unmarried working-class patients, the group which previously constituted the bulk of chronic patients.

Perhaps even more important, follow-up studies of released patients have shown that psychoactive drugs can be used successfully in preventing the re-hospitalization of chronic schizophrenics and in making it possible for them to live at home and to hold regular jobs. The prolonged treatment procedure is safe in most cases, given adequate safeguards, chief among which is proper skilled medical supervision. The drugs used do not appear to bring about adverse side effects nor to impede the pa-

**President, American Psychiatric Association, Director of the National Institute of Mental Health, National Institutes of Health, Bethesda, Maryland.

*Presented at the Thirteenth Annual Institute in Psychiatry and Neurology, North Little Rock Division, Consolidated VA Hospital, Little Rock, Arkansas.

tient at his work or in learning new tasks.

One pilot study was conducted last year by the Research Unit of the Manhattan Aftercare Clinic in New York. A special Day Hospital facility was set up for the treatment of patients who, after release from mental hospitals, suffered a recurrence of severe psychotic symptoms. During the year, 26 patients (21 women and 5 men) who suffered such relapses were given intensive drug therapy at the Day Hospital under the supervision of psychiatrists, social workers, and nurses. The required drug dosage was adjusted daily. The patients were given occupational therapy. When family problems were involved, the social worker counseled and helped. In all 26 cases, the psychotic symptoms were brought under control within 6 weeks or less, and the patients were able to return to their duties. Absence for such a limited period did not result in job loss.

The most remarkable finding in this study thus far has been the rapid achievement of remission in the Day Hospital patients, who return to their jobs far sooner than did patients who were rehospitalized. Treatment in the Day Hospital also seemed to promote better community adjustment, and these patients appeared to have learned that they could discuss recurrence of symptoms without fear of being rehospitalized.

In another study, a 4-year follow-up of 330 patients who were given courses of drug treatment after discharge from the Delaware State Hospital, showed that only 14 percent of such patients suffered relapses which required rehospitalization; 47 percent of those not kept on treatment had to return to the hospital.

Since psychological and social factors enter into the shifting mental status of a patient under drug treatment, several studies have been designed to separate out the effect brought about solely by medication. Such a study was conducted at the psychopharmacological research unit of the Downstate Medical Center, State University of New York. Medication was given, along with brief psychotherapeutic interviews, to 173 schizophrenic out-patients in the form of capsules containing either placebo, prom-

azine hydrochloride, or chlorpromazine hydrochloride. During the course of treatment 29 patients (16.8 percent) were hospitalized for mental illness. An analysis of the research record showed that 28.6 percent of the placebo patients were hospitalized, while 18.2 percent and 4.8 percent of the promazine and chlorpromazine groups, respectively, were hospitalized. The number of patients showing clinical improvement at 6 months was much higher in the drug groups than among patients on placebo. The amount of social dysfunctioning as reported by relatives was greater in the placebo group. The relatives stated that they found it easier to live with the patients who were on drug therapy.

Another study conducted at the out-patient department of the Springfield State Hospital, Sykesville, Maryland, also points up the importance of continued drug treatment in the care of previously hospitalized mental patients. This project, begun in 1958, investigated the importance of continuing chronic psychotic patients on medication after their release from the hospital. All patients in the study were first stabilized on one of six drugs and then randomly assigned either to a control group which was continued on active medication, or to an experimental group which was gradually transferred from drug to placebo under double-blind conditions. During the preliminary phase of the study, and at intervals thereafter, patients were evaluated by psychological tests, and their families or the people with whom they were living were interviewed by the social workers. Relapse occurred significantly more frequently during the withdrawal or placebo period, the relapse rate being approximately three times as high during the placebo period as during the period on medication. Patients who relapsed while on placebo were removed from the study and placed on medication; three-fourths of these patients did not require rehospitalization but were able to regain stability after medication was resumed.

These studies emphasize the importance of establishing sufficient community-based aftercare clinics where discharged patients or those acute or chronic psychotic patients being treated on an

outpatient basis can be kept on a medically supervised regimen of drug therapy. The studies also indicate the wisdom of providing drugs for indigent patients. A few states are now doing this, but in the majority of states, indigent patients are unable to procure the drugs needed to keep them out of the hospital, and existing social agencies are not financially equipped to help them. I might mention at this point that clinical evidence to date does not lend support to the concern about possible deleterious effects of long-term drug use. The National Institute of Mental Health is currently supporting a 5-year follow-up study at the Manhattan After-care Clinic, designed to measure any such effects in patients under drug therapy.

Another study, being conducted at the Massachusetts Mental Health Center in Boston, is providing further evidence of the effectiveness of drug treatment in creating clinical improvement in chronic schizophrenics. This study was initiated to determine how much of drug effectiveness is due to the drug *per se* and how much to other causes; and whether there are significant social and environmental differences between hospitals which may account for the differences between drug effects in one setting and another.

Of sixty chronic schizophrenics transferred from a State hospital to an intensive treatment center (the Massachusetts Mental Health Center), 33 received drugs in addition to other therapy and 27 were treated identically, except they were not given drugs. Comparison groups were composed of 55 patients remaining at the State hospital, of whom 25 were assigned to drug treatment and 20 were not. In neither setting were the patients assigned to "research wards." The criteria on which patients in the four groups were compared were clinical improvement and discharge rate. Findings showed only slight differences between the State hospital groups and the intensive treatment center groups after 6 months. At 18 months, however, the release rate was higher for the intensive treatment center groups, suggesting the possibility of a beneficial carry-over of milieu effects in patients who had originally been transferred to the Massachusetts Mental Health Center.

At least two factors are cited as possible reasons for the higher rate of release to the community from the intensive treatment center. First, the State hospital criteria for discharges are much more stringent. And second, the Massachusetts Mental Health Center staff carried on intensive social service work with families of patients, so that in many more instances a family or transitional facility was available to which the patient could be released.

Another whole group of extremely important studies have been or are being devoted to an investigation of the comparative efficacy of different drugs. Many of these are familiar to you, since they are your own Veterans Administration research projects. The National Institute of Mental Health has also supported two comparative studies of the phenothiazines—one with acute schizophrenic patients at the Spring Grove State Hospital in Maryland, and the other with chronic schizophrenic patients at the Napa State Hospital in California. Both of these closely parallel the Veterans Administration Study No. 3 with acute patients. Reports from all three studies are to the effect that chlorpromazine (thorazine-SKF), triflupromazine (Vesprin - Squibb), prochlorperazine (Compazine - SKF), and perphenazine (Trilafon-Schering) are of a similar order of efficacy. All are reported to be superior in creating clinical improvement to placebo, phenobarbital, or mepazine—mepazine (Pacatal - Warner Chilcott) appearing to be little different from placebo in its ability to alter psychotic symptoms.

Many investigators have suggested that to be effective in the treatment of psychotic symptoms, a phenothiazine must produce unpleasant neurological side effects. Systematic study of the relationship between the production of neurological side effects and clinical potency will have both specific practical implications for the use of existing drugs and for the development of newer and more effective phenothiazines. For this reason, the National Institute of Mental Health, through its Psychopharmacology Service Center, has developed a 9-hospital cooperative study of the effectiveness of three phenothiazine derivatives—thiori-

dazine (Mellaril - Sandoz), Chlorpromazine, and fluphenazine (Permitil - White; Prolixin - Squibb)—in the treatment of acute schizophrenic patients. Thioridazine and fluphenazine are relatively new phenothiazines. It is reported that of all the phenothiazines now in general clinical use, thioridazine is the least likely to produce neurological side effects and fluphenazine is probably the most likely to do so. It is important to determine whether either drug possesses clinical superiority over, or qualitative differences from, chlorpromazine. The study now under way will, in addition, provide valuable information concerning the differential responsiveness of male and female patients to the three drugs.

Since the 9 hospitals have been selected to represent a broad spectrum of clinical treatment milieus, ranging from private hospitals and university psychiatric pavilions to psychiatric wards in city hospitals and the admission services in state hospitals, the study will cast some light on the relative effectiveness of drug treatments in different hospital environments and will provide the first systematic data relevant to the long-standing question: "Are drugs more effective in public mental hospitals than they are in university psychiatric pavilions?" If the answer should be in the affirmative, an investigation of the causes would give us valuable information for the better management of psychiatric patients in a variety of settings. The broad range of psychiatric hospitals involved will also insure that the final results will be more representative of the true effectiveness of these drugs than would results obtained from studies in a single hospital or in a more homogeneous group of hospitals.

Each of the 9 hospitals will study 40 patients (10 in each of 4 treatment groups). Newly admitted schizophrenic patients aged 16 to 40 will be selected for the study if they present two or more of the following types of symptoms or behavior: thinking and speech disturbances, catatonic motor behavior, paranoid ideation, hallucinations, delusional thinking, disturbed affect and emotion, and disturbances of social behavior and interpersonal relations. The patients will be on the prescribed research regimen for 6

weeks. A double-blind procedure will be used throughout. Improvement during the hospitalization phase will be assessed by the Lorr Inpatient Multidimensional Psychiatric Scale, the Burdock Ward Behavior Rating Scale, the Clyde Mood Scale, and clinical judgments. In addition to the primary aim of evaluating the efficacy of the drugs, the study will also allow for the follow-up of a large cohort of schizophrenic patients for at least 2 years. At 6-month intervals, assessments will be made of the patients' discharge status, psychopathology, social performance and adjustment, and treatment program. Social workers will interview family members for their perceptions of the patients' progress, home conditions, and attitudes toward treatment.

The results of this multi-hospital study will complement the results obtained from the concurrent cooperative study—Study No. 6—now being carried out by the Veterans Administration, this study is evaluating thioridazine and fluphenazine in male schizophrenic patients newly admitted to V.A. hospitals. Since the population studied by the Veterans Administration is likely to be somewhat less acutely ill than the population in the 9-hospital study, it will be important to see whether the results obtained in the two studies are or are not the same. Since both cooperative studies will utilize a common clinical rating instrument—the Lorr Scale—it will be possible to determine whether Veterans Administration patients differ significantly in type or severity of psychiatric symptomatology from patients newly admitted to state or private mental hospitals.

From the scientific point of view, there are two major reasons for collaborative studies of psychiatric drug therapy. First, such studies allow one to increase the generalizability of findings. If the only question being asked is whether drug X is better than placebo, then the answer can often be obtained with groups of 20 to 40 patients. However, much larger groups of patients are necessary if one wishes to make refined discriminations between compounds which are closely related chemically and pharmacologically, such as the phenothiazines; or if one wishes to increase knowledge of predictors of drug response or to define the spe-

cific types of patients for whom a particular drug is best suited. Multi-hospital studies allow for comparisons among institutions. In the mental health field there has been much discussion of the possible differences in the effectiveness of drugs given in varying hospital and clinical settings. A multi-hospital study provides both the number of hospitals and the number of patients needed to clarify these complex drug-environment interactions.

Other attempts to identify and to control or assess environmental variables thought to affect response to drugs are represented in studies conducted by the Clinical Neuropharmacology Research Center. This is a joint research facility of the National Institute of Mental Health and Saint Elizabeths Hospital; it is located at Saint Elizabeths and is dedicated to the study of the action and mode of action of drugs on mental function.

In a preparatory study of clinical research methodology, investigators at this Center initiated a comparative evaluation of two phenothiazines (trifluoperazine (Stelazine - SKF) and prochlorperazine (Compazine - SKF), within six wards of the research service. Twenty - four chronic schizophrenic patients (12 men and 12 women) were subdivided into six groups of four, and were cared for in special day rooms. Each group of four was randomly subdivided into two groups of two patients each; one subgroup received trifluoperazine and one prochlorperazine. The drugs were administered by a double-blind procedure. On each ward, the group of four formed the nucleus of a larger group of ten patients, the six additional members consisting of chronic schizophrenics receiving their customary medication. The six groups received consistent nursing care throughout the study, by selected day and evening nursing assistants, a previously defined nursing and activity routine being followed in each case. Prior to initiation of the project, regular meetings of personnel were utilized to acquaint all participants with details of procedures and use of rating scales. Thirteen different rating instruments were employed, and, according to needs, these were administered

at daily, twice weekly, weekly, monthly, and three-monthly intervals.

In this design, it was hoped to control variables related to physical milieu through use of similar day rooms, and to control the effect of interpersonal and social milieu through carefully designed nursing and activity procedures carried out by consistently assigned and similarly trained nursing personnel. In addition, the study was designed to provide a vehicle for (1) the mobilization and cultivation of latent research skills in the nursing staff, (2) the evaluation of a variety of rating instruments for repeated assessment of patient behavior, and (3) the development of economical ways of collecting, tabulating, and processing data. It was felt by the investigators that each of these objectives of the design was achieved.

Eight of the rating scales used reflected changes in patient behavior during the course of the investigation. A scale designed to assess seclusiveness, which was completed daily for each patient, showed significant improvement for all patients, though the degree of improvement was not statistically significant for either drug group taken singly. Another daily scale, designed to evaluate purposefulness and appropriateness of activity, reflected improvement in both drug groups, though this reached the level of statistical significance only in the prochlorperazine-treated patients. Interestingly, the degree of improvement in men was significantly greater than that in women, though in the context of the present study this difference cannot be attributed entirely to the difference in sex of the patients. Other rating instruments revealed trends toward lessened underactivity, increased cooperativeness, enhanced social appropriateness, and more effective participation in structured social and recreational activities for both drug groups. The objectives of the study did not include an attempt to differentiate drug effects from those due to the planned nursing and activity program; however, suggestive evidence on this point appeared between the 32nd and the 36th week of the project when placebo was substituted for active medication for all patients and a reversal in most of the above improvement trends occurred.

In another study conducted by this Research Center, an effort was made specifically to investigate the interaction of drug treatment and non-pharmacological therapies. One hundred twenty-six schizophrenic patients (63 male and 63 female), selected for the chronicity and the severity of their symptoms, were randomly assigned to one of three substances (trifluoperazine, prochlorperazine and placebo) and to two distinct patterns of non-pharmacological ward treatment (routine nursing care vs. a program of intensive social and interpersonally-oriented nursing therapy). A double-blind procedure was used for drugs. Thus, through a two by three factorial design, it was possible to evaluate the effects of each kind of drug treatment and each program of non-drug therapy independently and in conjunction.

Compared with the placebo, both drugs were found effective in the doses given, the effect being achieved in 3 to 5 weeks. The program of intensive ward treatment alone (in contrast to routine care) led to a significant improvement in male patients, though among female patients a trend in the same direction failed to attain statistical significance; this effect in male patients was comparable in degree to that achieved with drugs alone. Among female patients, the moderate improvement due to prochlorperazine appeared to be enhanced by the intensive ward program, but this was not the case for women receiving trifluoperazine.

Because of the necessarily complicated context of this study, the investigators do not feel that the differences in response between male and female patients can be attributed exclusively to differences in sex.

The investigators do conclude, however, that the sensitivity of symptoms of chronic schizophrenic patients to non-pharmacological milieu variables requires that due allowance be made for them in assessing the role and effects of drugs in a treatment program.

There is one other incidental yield which these two studies have clearly demonstrated. By being planned to proceed simultaneously in a number of wards in the hospital rather than in a single research ward; by centering group nurs-

ing techniques and the systematic training of attendants and nurses in such techniques; and by emphasizing clinical observation and the careful use of agreed terms, a drug trial can become a powerful instrument in changing the therapeutic climate of a ward, and mobilizing latent therapeutic skills in personnel, at the attendant, nurse and physician level. This effect outlasts the termination of a formal study; and sets the stage for more discrete studies which it would have been impossible to carry out in the original setting.

Although most of the clinical studies to date have concentrated on the phenothiazines, there has been considerable interest during the past three years in several new and apparently potent drugs for the treatment of depression. Included among these antidepressants are several monamine-oxidase inhibitors. Iproniazid, the first of these, is presently being most extensively studied, although its side effects have recently caused it to be withdrawn from the market. An understanding of its mode and site of action is important to the development of safer and more effective substances. Imipramine, the other major antidepressant is structurally related to the phenothiazines.

There are now a series of reports in the literature on controlled studies using iproniazid and imipramine. The evidence to date supports the hypothesis that imipramine is more potent than placebo in the treatment of depressions in general, especially the more severe psychotic or endogenous depressions. There is no evidence, however, that imipramine is more effective than electroconvulsive therapy. The results with iproniazid are less clear. Most studies find it more effective than placebo, but probably less effective than imipramine. Iproniazid appears to have some advantages in the treatment of neurotic or reactive depressions. On the whole, the evidence shows the antidepressants to be interesting and probably useful therapeutic agents, although they do not appear to be able to replace electroconvulsive therapy.

The evidence with regard to the milder tranquilizers like meprobamate is even more shaky. There is some suspicion that the attitude of the therapist profoundly

influences the effects of such drugs. A study is currently being conducted in the outpatient departments of the University of Pennsylvania and the Johns Hopkins Hospital to investigate this factor. There is some evidence, nevertheless, that meprobamate affects mood more in anxious people than in those who are not anxious. One study showed that a meprobamate pill affected office workers who often turned up for sick call with neurotic complaints differently than did a placebo. Office workers who did not turn up for sick call reacted to the meprobamate pill and to the placebo in the same manner.

Another area in which the value of drugs appears to be equivocal is in the treatment of disturbed children. Reports from recent studies have raised questions regarding the effectiveness of the use of tranquilizing drugs, successful with adults, in treating children with behavioral problems. Treatment with meprobamate and prochlorperazine have been observed to provide no evidence for the superiority of either drug over placebo. Recent studies were conducted at the Johns Hopkins University to determine the effectiveness of psychotherapy alone, and in conjunction with perphenazine or placebo in the treatment of neurotic or hyperkinetic children. Whether on perphenazine or placebo, two-thirds of the neurotic group, and one-third of the hyperkinetic group demonstrated significant improvement. The findings suggest that the diagnostic differentiation between neurotic and hyperkinetic is important in predicting outcome of patients receiving brief outpatient treatment. Investigators concluded that the prompt and usually satisfactory response of neurotic children to brief psychotherapy left little room for any but the most remarkable drug to demonstrate its effects. More effective pharmacologic agents must be sought for use with hyperkinetic children who do not respond so well to psychotherapy.

One of the key problem areas in the whole field of psychopharmacology is the lack of sufficient early clinical investigations of new psychiatric drugs. Work now in progress still falls far short of the need to screen promising new compounds in order to develop more and better therapeutic drugs. Animal drug-screening techniques can still provide only very tentative information about a drug's therapeutic possibilities. Most recent discoveries of new types of psychiatric drugs have been made by clinicians on the basis of studies carried out in patients. Although the safety of new drugs and their ability to affect behavior or central nervous system activity may have been established in experimental animals, their special therapeutic properties have been first suggested by their effects in patients. An expansion in early clinical drug evaluation is now going on. This should help facilitate the discovery of new and important drugs, and make it possible for promising new drugs to receive a thorough clinical evaluation at an early stage of their development.

The total picture in psychopharmacology is, indeed, most hopeful. The advances made thus far have given the entire field of psychiatry a tremendous push forward. I am confident that we will be able to make equally great progress as we move ahead with our drug research efforts. There is another frontier, however, that we must begin to explore in depth very shortly. That is the need to create and to develop a whole new complex of community-based psychiatric facilities and treatment resources which will permit us to consolidate the progress brought about by psychopharmacology. But that is another subject—and a subject to which I am so devoted, that I will stop now, before I find myself in the middle of another paper.

The Phobic Syndrome — Its Nature And Treatment*

WILLIAM B. TERHUNE, M.D.**

A phobia is a strong unreasonable fear of specific situations inhibiting a person from entering or remaining in them. The term *situation* in this context signifies a place, an activity, or proximity to a particular object. Despite the number and variety of phobias, the phobic syndrome is definite and specific. It is readily described and diagnosed. Once phobic reactions occur, they are likely to become progressively worse unless treated. Because of his fear, the phobist circumscribes his life to avoid the possibility of finding himself in a dreaded situation. Although he consciously ascribes his anxiety to certain situations, actually his fear is related to earlier life experiences and is the result of fundamental psychological mechanisms. The specific fears become conditioned emotional reactions. Thus, a phobia is one of the purest forms of the psychoneuroses.

The phobic is afraid of fainting, creating a scene, "going crazy," as he puts it, dying, or finding himself in a situation from which he cannot quickly escape. Phobics may experience fear in open places, closed places, high places; more usually in stores, restaurants, churches, theaters, trains, beauty parlors, barber shops, automobiles, and any place where they are alone. Often the phobic situation is even more specific. For example, a woman phobic refused to leave her house for fear that she might bump into a pregnant woman on the street and by doing so injure her. Another was afraid of entering a drug store and of being near a physician's bag. Her explanation for these fears was that she might pick up a bottle of medicine or a surgical instrument that might injure her or someone else.

In addition to fear of places, the phobic situation may be proximity to vari-

ous animals, to feces or dirt, to the idea of specific diseases—but actually, these are rare.

More than a hundred specific phobias, named for the situation feared, are enumerated in the literature. Examples are agoraphobia, syphilophobia, coprophobia, topophobia. The number of situations which arouse, or might arouse phobic reactions could run into the thousands. To give each one a separate diagnostic name, usually taken from the Greek, serves no useful purpose. In current literature there is scant mention of these special phobias; instead, the focus is on the underlying cause and the clinical picture.

The symptoms of the phobic syndrome are influenced by the current culture, but except for such minor modifications, they remain fixed. An obvious modification is that today most phobics will not travel in airplanes, a symptom not encountered thirty years ago.

The phobic syndrome occurs in individuals with typical fundamental types of personality, who have been reared in over-protective, dependent environments.

These individuals feel that much is expected of them and are afraid that they will not be able to meet their own and other people's expectations. Thus, when they have to face life, meet a crisis, they are overwhelmed by fear, which results in panic. Phobics are intelligent, sensitive, perceptive, and charming people who are fundamentally apprehensive and have been taught to meet fear by escape rather than by challenge. They have not learned that panics only occur in people who consider fear significant. They do not know that fear is insignificant. Most of them come from small families, and have never needed to face any competition. They have no concept of how to deal with competition and frustration. With this fundamental personality and environmental background, they are unable to deal with unexpected, trying situations. They are sweet, dear, passive, compliant, dependent people without any protective cloak. They

*Presented at the 12th Annual Institute in Psychiatry and Neurology Feb. 25-26, 1960, Little Rock, Ark.

**Medical Director, Silver Hill Foundation; Associate Clinical Professor of Psychiatry, Yale University.

resist deep and meaningful relationships. Nevertheless, they are potentially remarkably able people, as shown by their successes after they are cured.

The following summation of the personality traits that characterize the phobic is based on observation and treatment of the phobic syndrome over a period of some thirty years.

The majority of the patients were in the age group twenty to forty. Seventy-five percent of them revealed that one or both parents were markedly neurotic, in some instances themselves phobic. Eighty-five percent were married, and all of them had less than the average number of children, frequently only one child.

The men were executives and professionals, and the women homemakers. As a group, the patients had excellent and above-average opportunities in education, travel, and cultural development, but half of them failed to take advantage of these opportunities. They lacked the self discipline of moderate regimentation. They were not particularly satisfactory marital partners or outstandingly good parents. Yet, they were loved, probably because they were easy-going. There was no demonstrable connection between sexual maladjustment and the phobias. With the exception that most of them did not find sex essential in their lives, none were found to be fundamentally homosexual. The childhood histories showed over-protection and an atmosphere of apprehension, in which escape mechanisms were naturally fostered. These patients were suggestible, imaginative, and sensitive; they were intelligent but had no strong drives; they tended to run away from unpleasant situations. Finally, they were compliant in small things but selfish in important matters; they were affectionate in a superficial childlike way, hoping to receive affection, attention, and protection in return, but they seemed incapable of feeling deep unselfish love.

This characteristic clinical picture is so consistent that I believe the phobic reaction may be considered a disease entity, without regard to the specific phobia or phobias, and I find that it is best treated as a disease entity.

The general psychodynamics of the pho-

bic syndrome are simple, as is illustrated by this example.

A woman standing outside of the Pennsylvania Railroad Station in New York suddenly felt that she was going to die in the midst of strangers. She fainted, or at least wilted. On returning to consciousness she was confused and wondered if she had had a heart attack or a stroke. The policeman to whom she appealed for help took her to a nearby hotel and sent for her husband, who took her home. Thereafter, for years this woman was a phobic. She would not go anywhere alone—would not ride on trains, go into stores, theaters, churches, restaurants, automobiles, walk alone, or stay alone. She was house-bound. She always kept brandy and spirits of ammonia available.

Now for the general psychodynamics of the case. She had been reared in a small southern city where she and her family were important and socially prominent. She loved the happy life of such an environment. Her husband was promoted to the presidency of his company and his business necessitated living in New York. She hated the huge city, the impersonal way of life, an environment in which she felt she was a nobody after having been an important somebody all her life. She was called on to be the wife of the president, to do for others, to rise to leadership, and she did not know how to do it. Her husband met important and interesting people, wanted her to go all over the world with him and be a company wife. Then, in front of the Penn Station, just after he had left on an important trip, when she had failed him and herself by not accompanying him, in the midst of strangers she had her first and acute phobic reaction. Had she been treated within seven days, she probably would never have developed the chronic syndrome. Her subconscious automatically found a perfect excuse for not mingling with people in her new environment and meeting the new and valuable challenges.

As is shown in this case, the phobic reaction is always a displacement of anxiety. Free-floating anxieties which have been building up are displaced by specific anxiety situations and become fixed as conditioned emotional reactions.

The general psychodynamics of the phobic syndrome can be summarized in a profile of a phobic:

1. A constitutionally apprehensive person;
2. A passive, dependent, delightful, and mildly cyclothymic personality;
3. Reared in a protected environment, never taught to accept danger as man's greatest thrill and opportunity;
4. Probably has one or more phobic parents;
5. Placed under emotional strain too great for his psycho-physical makeup, with a consequent rebellion of the sympathetic nervous system leading to symptoms of panic, chronic escapes, deception about the existence of some of these symptoms, and conditioned emotional responses;
6. Chronic phobic invalidism;
7. Complete loss of self-respect.

In addition to these general psychodynamics, which are very important, there are deeper and individual psychodynamics in each case.

Three types of phobic syndrome are encountered—

1. Incipient
2. Acute
3. Chronic

The incipient is often unrecognized. The acute becomes chronic unless treated immediately, since the individual finds himself in more and more situations which call forth additional phobic reactions. This emphasizes the importance of early detection and comprehensive treatment.

Children with certain personality attributes, and also children who have had certain traumatic experiences, are fertile soil for phobic reactions when they become adults. The phobic-vulnerable child is particularly superstitious and apprehensive, introverted, and dependent, and he grows up without defenses against panic. These are "good" children who are likely to be solitary and tend to avoid both competition and unusual difficulties. Some of them are manifesting incipient phobic reactions which usually are largely unrecognized.

The acute phobic reactions occur in the twenties or early thirties, when unexpected responsibilities are thrust upon an individual who has a vulnerable person-

ality. To such a person, the initial phobic reaction is a devastating experience. He actually falls to pieces, physically, mentally, and spiritually. He is depressed, confused, is unable to think or make decisions of any kind, and has a sense of unreality. Unless he is treated soon after this occurs, he will take refuge in chronic phobic reactions. This is because he refuses to re-enter the situation in which the panic occurred—the automatism of escape occurs, is accepted, and becomes a way of life.

It is chronic phobic reactions that are most frequently seen in medical practice. Starting with one phobic reaction, the phobic quickly acquires others. One seldom sees a phobic who does not have at least ten specific phobias. About one in ten phobics have, in addition, a special phobia not usually encountered, which they hesitate to disclose to others. These could be termed "the hidden phobias" and it is most important to expose them. As already indicated, the individual with a phobic personality is generally lovable and easy to live with, precisely because he tends to avoid conflict and trouble. Accordingly, since he is a "sweet person" close relatives accept his "quirk" or "foible." The relatives are inclined to smile at these reactions, to make the best of them, and enjoy the person's "sweet disposition" which is somewhat a defense against trouble.

Perhaps Jim won't ride in the subway and perhaps Mary won't go to the supermarket, but it doesn't seem to be very important. Jim can get to work in a bus, and Mary can go from one little store to another to do her marketing—the time she wastes is her own. It all seems to be harmless. But nothing could be further from the truth, as many a phobic's family has learned the hard way. Phobic reactions are progressive, and the phobic situations multiply. Ever-increasing phobic demands first circumscribe and finally destroy the victim's usefulness and happiness. Many phobics become housebound, some even become bed-bound; and in addition they cannot stay alone.

At this late stage the husband or wife, or other close relatives insists that the phobic seek treatment. Almost invariably, it is the relatives who push the phobic

into treatment. He does not seek it for himself since he has always been deeply ashamed of his fears. By this time, the phobic reaction has become a complex, deep-rooted neurotic mechanism.

The obvious prophylactic measures for this form of psychoneurosis is indicated in the foregoing discussion. The best time to treat a phobia is before it occurs. Parents, family physicians, teachers, and others who are in close contact with children should learn to recognize early evidences of phobic reactions, and should be alert to the danger signals of undue fear, shyness, and apprehensiveness. Children revealing phobic reactions should receive prompt and skillful psychiatric guidance.

Preventive measures can be taken long before the individual has progressed in his difficulties to the point where psychiatric guidance is needed. Children with personality traits that might tend to make them phobic must be shown how to be courageous through kind, patient, and tolerant example. Parents should keep in mind that courage cannot be taught by exhortation, but only by example and by the way a child is handled. The fearful child should not be over-protected. He should be encouraged to be adventurous, to accept the discomfort of fear in return for the pleasures of adventure and achievement. It is especially important that the basically apprehensive child participate in so-called dangerous sports—skiing, sailing, figure skating, swimming, exploring unknown territory in the country, traveling alone, and perhaps—when the young person, is old enough—even learning to fly. Such children should be encouraged to take part in competitive games. They need to learn how to put forth effort, even to the point of discomfort, for the thrill of winning the race—whatever that race is.

Children can be taught to avoid escape mechanisms. They can learn not to use subterfuge as a way of escaping unpleasant situations or discomforts, and as a means of justifying failure.

Prophylactic measures at the acute stage consist largely of understanding that an acute phobic reaction is an emergency calling for prompt treatment, and by prompt I mean that the psychiatrist must see the patient at once, not next

week or next month when his appointment book shows that he has an unfilled hour. No matter how he must juggle his other commitments, he must deal with an acute phobic reaction immediately. Treatment must be not only prompt but complete. If it is not, the acute onset will progress and will become chronic—a devastating way of life.

Accurate over-all figures on the incidence of this form of psycho-neurosis are not available, since patients with phobic reactions are generally seen by psychiatrists only when they reach the chronic phase of their illness. I believe however, that the incidence is higher than is ordinarily assumed. My estimate of approximately three percent among psychoneurotic patients is based on having treated 350 phobics among a total of 6,500 such patients. Other psychiatrists report an incidence as high as eight percent. One fact is generally recognized. Psychiatrists are treating more phobics than in former days. This is perhaps due to the growing public awareness of the need for psychiatric intervention in the early stages of any psychoneurotic disturbance. It may be that there is actually an increase in incidence because of the increasing complexities of modern life. To a much greater extent than even a generation ago, people are called upon to make quick adjustments of all kinds. Everything is speeded up—the pace of travel, of communication, the advances of science, the growth and pressures of population, and so on. As a result, individuals with personalities that tend to make them phobics are more challenged by life than in former times.

In treating the patient with phobic reactions, it is necessary to consider the physical condition, constitutional makeup, and the environment under which phobias have developed. It is essential to understand the patient's personality, the tensions under which he lives and works, and any unusual stress situations in his past or present, and how he has met these situations.

Since phobias, whatever their form, are neurotic attempts to compensate for inefficiency in adapting to life, the physician must not only deal with the specific phobia but also discover and treat the under-

lying conditions of which the phobias are a symptom. If the patient is to be cured and stay cured, he must be helped to recognize the conditions which he is unconsciously trying to cover up and escape. He must then be helped to see these conditions as realities which he can meet intelligently and adequately.

Since the phobic reaction, in my opinion, is a symptom of an underlying psychoneurosis, treatment is similar to that for other types of psychoneurosis, with additional special techniques. These special techniques are designed to recondition the patient's habit response of phobic reaction to situations which he avoids.

As in the treatment of all the psychoneuroses, the first step is to take a comprehensive therapeutic history. In addition, the psychiatrist attempts to list every phobic reaction the patient has had in the past and now experiences. He must learn what the phobias are, what they mean to the patient, and how he interprets and reacts to them.

It is not easy to get this information, and it can seldom be obtained in the first few interviews. The patient wants to escape his phobic discomfort and be relieved of his phobic reactions. Yet, because of the secondary gains of his illness, he subconsciously does not wish to get completely well. This is because he resists being forced to recognize and deal with fundamental difficulties and he is also afraid that the doctor will guide or make him do these things which he is afraid to approach. Indeed, the phobic will use subterfuge to lead the psychiatrist away from some of his phobias and he nearly always reports that he is much better, which usually is not true.

For a complete picture, submerged traumatic experiences must be uncovered, and unconscious fears must be brought to consciousness. Even when this has been done, the fears are not readily conquered. After the patient is intellectually aware of the cause and nature of his neurosis, he is still likely to attempt to escape discomfort through phobic reactions. This pattern must be broken by helping the patient to integrate the principles of psychiatric reeducation into his personality and by helping him to mature emotionally.

Phobics need to be placed in a thera-

peutic environment while receiving intensive treatment. They need a definite schedule of work, play, exercise and rest, and social contacts with a small group of pleasant people while they are given didactic reeducation. It is difficult to treat them through office visits—but at times it can be done. Since I have described in a previous paper the processes of reeducation as carried out in a psychiatric rehabilitation center, they will not be repeated. You recall that there are daily psychiatric sessions with the psychiatrist, study of a series of pamphlets dealing in a didactic manner with various aspects of psychological adaptation reeducation, and group seminars of psychotherapy. This comprises the introduction to treatment.

The patient and the doctor next unearth, disclose and discuss the patient's unresolved difficulties. By this time the patient is mixing socially with others who are under treatment, is walking several miles a day, and is comfortable physically and emotionally. The evidences of improvement are stressed to increase self confidence. With the phobic patient, in distinction to patients with other types of psychoneurosis, the physician discusses his specific phobias and utilizes practical techniques for reconditioning them. In the process of reconditioning, the following principles are employed:

1. The patient learns to accept temporary discomfort.

2. He knows the nature of his illness, and understands the techniques for dealing with it.

3. He is by now, as a result of the first phase of treatment, not only willing but determined to recondition his emotional fear reactions.

4. Because of his trust in the psychiatrist who is treating him, and his motivation for getting well, he cooperates in specific undertakings that place him in situations of which he is afraid. In this way, his phobic reactions are reconditioned.

In the general reconditioning process, the patient has been prepared by the reeducation program, he has been built up physically, he is more mature, and he understands the nature of his difficulties. He knows the *purpose* of what he is at-

tempting to do.

Most important, the patient is helped to understand fear and to be willing to endure the discomfort that he may feel during periods of fear. He realizes that he will have to deal with fear throughout his life—not necessarily specific fear, but fear that may become attached to anything. When the patient has progressed this far, he is able to consider fear as something which brings interest into his life, and as a stimulus to courage. As a matter of fact, many people do things precisely because they are afraid; they learn to enjoy the experiences of fear. They are afraid to ride horses, so they ride horses as long as it brings them adventure. They are afraid to sail boats, so they do so for the joy in the sense of daring and skillful accomplishment.

Similarly, in treating phobics, the psychiatrist must show them how to change the misery of fear into the joy of adventure, and until this is accomplished, little permanent progress is made.

Each specific phobia must be dealt with along lines of this reconditioning process. In general, the relatively simple ones are treated first and the more complex follow. For example, assuming that a patient had all of the following manifestations of phobic reactions, the chronological order of undertaking would be: walking alone, going to the movies, to restaurants, hairdresser, church and the theater, riding on a train, driving a car, going to a distant city and flying in a plane. Note that there is increasing contact with people and active, interesting participation in life without accepting increasing risk and personal responsibility.

Now as to the technique of reconditioning. This is used only after the process of reeducation and basic treatment has been thoroughly accomplished.

When the psychiatrist sets the specific task, the patient must undertake it at once. He should never be allowed time to think it over. Delay arouses the patient's anxiety and gives rise to loss of confidence. On completing the task, he reports at once to the psychiatrist in person. If he fails in carrying out the assigned project, little is made of the failure, but a similar and perhaps more interesting task is set for him in the immediate future.

It should be remembered that the physician does not have the patient undergo fear to get rid of the fear—if this is attempted little that is permanent is accomplished. Instead fear must be accepted, it must be understood as having no significance in itself, and therefore endured as long as necessary—in order that a specific and desired purpose may be accomplished. This purpose is not to conquer the fear but to carry out some definite project *even though fear exists*. It is the purpose which makes all the difference in treatment.

The project assigned must be definite and outlined in detail. It should have a *purpose* and some pleasant factor to dilute, and later on to substitute for, the unpleasant fear. If some element of adventure, something unexpected and interesting is injected into a situation which is phobic for the patient, he is more apt to carry it out and even forget that he is or has been afraid.

For example, the psychiatrist says to a patient who is afraid to ride on a train: "Here is ten dollars. There's a taxi at the door. Take it and get on the train, which leaves in ten minutes. Go to New York and buy me a tie that will go with this suit. Also buy a papaya and three red bananas. Use your time on the train to decide about the kind of tie I should wear, where to find the papaya and the bananas."

The chances are that the patient will be so interested in carrying out this project that he will execute it successfully, and give little or no thought to his fears while on a train. It is the exciting purpose that is important.

Here is another example. The patient is afraid to walk alone in the country. The psychiatrist gives him a large piece of paper and a pencil, and says: "Take a walk along X lane. Draw a map of the area, showing every house and turn in the road. There are two bridges. Be sure to mark them. Return here in forty minutes and give me the map. If you aren't here in fifty minutes, I will get in my car and come and get you."

This last point gives the patient a feeling of protection, and somewhat allays the specific fear of walking alone.

As has already been said, such recon-

ditioning projects will benefit the patient only if he understands what is being done, if he has learned all about the nature of fear and the techniques of dealing with it, and above all if he is willing to experience temporary discomfort, knowing that this process will enable him to make a complete and permanent recovery.

When the patient has once done the specific things of which he is afraid, like riding on a train, walking alone, and so on, he must be put through the reconditioning process repeatedly, and he must never again be allowed to avoid situations from which he formerly escaped. Usually, after all the phobic situations that the psychiatrist has been told about have been conquered through assigned tasks, repeatedly carried out, some residual fears which the patient has not revealed come to the fore. These, too, must be dealt with, and the patient must be taught to cope with them.

The phobic is cured only when no phobias are active. He must never again give in to one of them. He must never obey the dictatorship of fear. If he does so, it is a practical certainty that the phobic syndrome will continue.

The next phase of treatment, which is carried on concurrently with the phases described, is that of helping the patient to mature, to build and strengthen character structure. To accomplish this, patients must be psychologically divorced from parents and other individuals on whom they are emotionally dependent. They must learn independence, make their own decisions and carry an ever-increasing load of normal responsibility. They must be prepared to play an active role in normal social life, business, and community affairs.

The final phase of treatment, follow-up, is carried on after the patient has returned to his usual environment. It consists of close and steady supervision for several months by the physician, who encourages and inspires the patient to persist in the new techniques and philosophies which he has learned, and helps him

to develop inner resources and the opportunities in the environment. In the course of this supervision, the psychiatrist sees to it that the advantages of a neurotic way of life remain removed, and that the patient does not secure secondary gains through psychoneurotic mechanisms.

This period of consistent supervision, in effect, after-care, should continue from one to three years. And the patient must be separated from any dependence he may have upon his physician.

To sum up: Treatment of this type of psychoneurosis is interesting and rewarding. Approximately 85 percent of these patients can be cured.

Here are some additional essentials of treatment:

1. Give the patient a great deal of attention. A phobic cannot be cured through a regime of a few sessions each week. Work with him at least five days a week in one-hour sessions for the first two months of intensive therapy.

2. Prescribe no drugs. Do not weaken psychotherapy by giving the patient medication. No Miltown, no thiorazine, no ataractics, no dexedrine, and no E.C.T. Psychotherapy is what is needed, and to date nothing else effects a permanent cure.

3. The patient who uses alcohol in any form should desist until completely cured. Thereafter, he should drink only for pleasure, never to allay fears or to escape.

4. The psychiatrist must be persistent and accept no compromises. Treatment must continue until the patient has been well over a long period of time—the phobic often tries to escape treatment by attempting to convince the doctor of recovery while actually still a victim of this neurosis.

5. The psychiatrist must be a warm, supportive person, who can combine understanding and kindness with firmness and forcefulness. He must understand psychodynamics and be skillful in utilizing all the principles of psychotherapy. For successful treatment of the phobic syndrome, he must be an outstanding psychiatrist.

Legal Problems Involving Medical Records

EUGENE R. WARREN*

Because of the recent activities of certain insurance companies in demanding the right to photostat medical records in the offices of the physician, or at other places, considerable confusion has arisen with respect to the physician's rights and the patient's rights with reference to medical records prepared by the physician as a part of his diagnosis, treatment and care of the patient. Let us suppose this state of facts:

Paul Drake, representative of the Shifting Sands Insurance Company, appears in your office and exhibits to you an authorization from your patient directing you to furnish medical information and copies of your records to the insurance company. Drake has a copying machine and requests that you put in his possession the original medical records of the patient which he will copy and then return to you. What are your rights, duties and obligations in this situation?

Let us first clearly understand that this legal memorandum does not cover orders of a court of competent jurisdiction issued in pending litigation. Whether or not medical records of a physician may be ordered produced in court for the purpose of inspection and copying under one of the rules of discovery now in effect in the federal courts and in most state courts, depends upon the particular circumstances of the case. In the instant example the insurance company simply has an authorization from the patient which is in as broad language as the insurance company can couch it, giving the insurance company no more rights than the patient himself to the medical record. The question here presented is novel, and apparently there are no cases in Arkansas to which we may look for guidance. We must, therefore, rely upon general principles of law in determining the proper answer.

First, I think the law is clear that medical records belong to the physician. They are his work product, prepared by him for use by him in his diagnosis and treatment of the patient.

Second, I think the law is equally well

settled that the patient is entitled to the medical data contained in the medical records of the physician. Courts have held that a patient has a property right in the information contained in hospital records, although the original records are the property of the hospital. To put it another way, the physician owns the paper and other material on which the records are kept, and he owns the records, but the patient has a property right in the information appearing or portrayed on the records.

Third, by giving an authorization or waiver to the insurance company, the patient can transfer to the insurance company no more right of ownership than he, the patient, himself possesses.

Fourth, no person in the absence of an order of a court of competent jurisdiction entered in pending litigation has the right to the possession of these records except the physician who owns them, nor does the patient or any lay person, or lay corporation, have the right to inspect these original records without the consent of the physician.

Fifth, the physician upon being presented with an authorization and demand for copies of the medical records, may insist that the copies be made by him or his authorized personnel, and may make such charge for furnishing a copy of the medical data as is reasonable, taking into consideration the material, time and effort expended in preparing such copies. If medical records prepared by the physician contain information which he considers the disclosure thereof to the patient would be detrimental to the health of the patient, he may refuse to furnish this information to anyone unless he is compelled to do so by an appropriate court order.

Sixth, the copies of the medical data furnished by the physician to the insurance company may be furnished at the convenience of the physician. I make this statement in no spirit of belligerence towards any company, but simply to make it clear that no patient nor insurance company has the right to expect the physician to stop his activities in fulfilling his engagements in caring for the ill

*Legal Counsel, Arkansas Medical Society.

and devote his time to furnishing records. Except for very unusual circumstances, the priority claim on the physician's time for furnishing these records is way down the list.

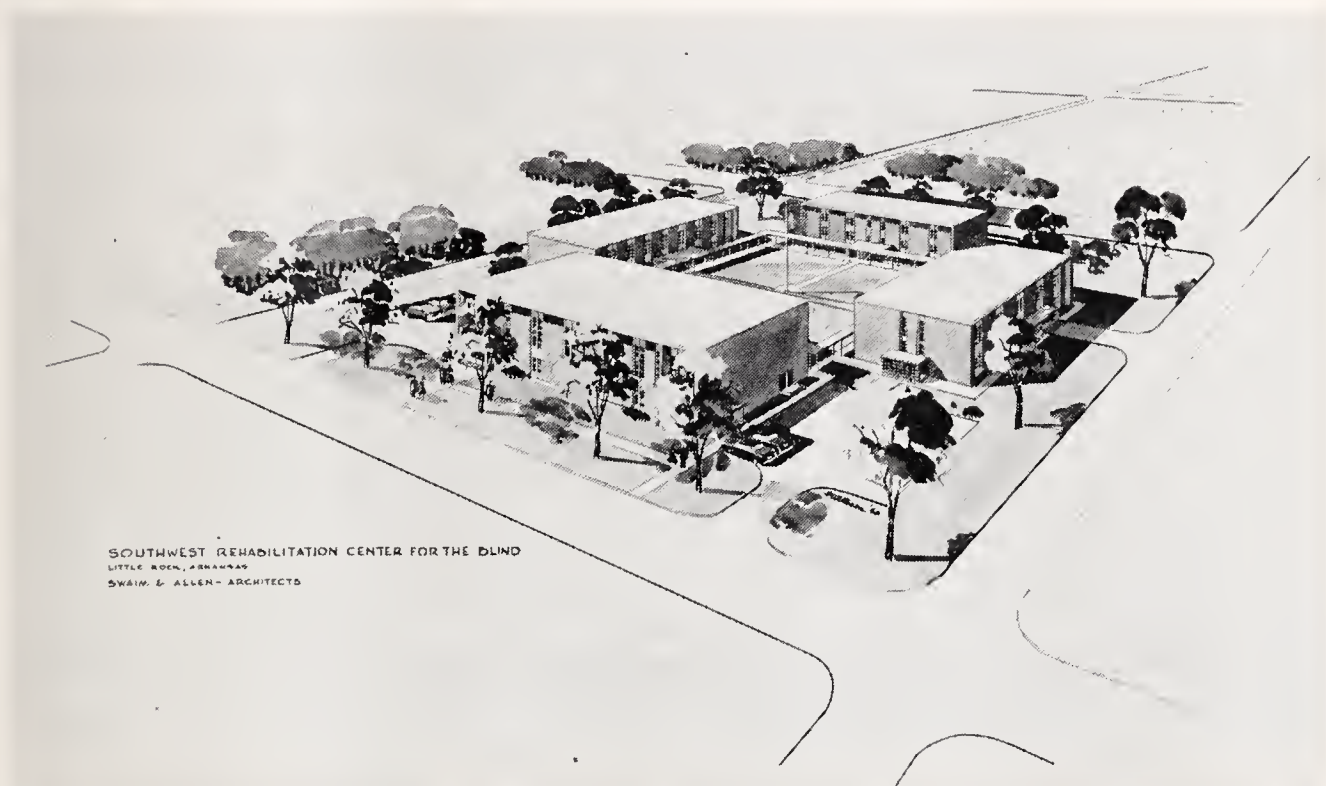
In furnishing medical records and preparing medical reports on behalf of the patient, the physician many times expends considerably more time than the fee which he feels he can appropriately charge therefor justifies. Many physicians consider this work a necessary nuisance, solely for the convenience of the patient and as a professional courtesy to the patient. The physician's place in the

scheme of our society is to treat the sick and not to prepare historical reports or explanatory documents. It would thus seem that every effort should be made to minimize the paper work demanded of the physician by the patient which does not directly bear upon diagnosis and treatment of the illness from which the patient is suffering. Continued impositions on the physician's time by demands such as are contained in the illustration prompting this memorandum should be met by the physician with a definite assertion of the physician's rights as contained in this memorandum.

◆ *What's* NEW ◆

A Service for Your Blind Patients

J. B. CROSS, M.D.*



Recently it came to my attention that some of our medical society members were not familiar with a unique service available in Arkansas to our blind patients. This service is one of the few "firsts" that Arkansas can boast. It is the Southwest Rehabilitation Center for the blind, a private organization sponsored by the Lions Clubs of Arkansas which literally accomplishes miracles in rehabilitating the blind.

Of what importance is this service to medicine? It's a matter of putting your patient in the center for service just as you hospitalize a patient for hospital services. The unrehabilitated patient is as helplessly incapacitated as a hospital bed care case. In reality the Center gets the blind patient out of the chair and bed and teaches him to feed himself, to walk, to light a cigarette, to bathe, to cook, to

keep house, to have a hobby, to take part in recreation, in short to live again. It is a basic service of psychological and physical rehabilitation of the individual. The center does not attempt to teach a trade or to educate, its purpose is rather to serve as a prerequisite to these things. It is therefore a personal adjustment training course available to patients of any walk of life without regard to financial status or race. Separate centers are maintained for white and colored.

The beautiful new facilities have accommodations suitable to the taste of the most discriminating and information regarding admission and financial arrangements are available to the physician by letter or phone call to the center. Services are handled according to the individuals ability to pay.

The need for a personal adjustment training course for the adult blind was first presented to the Little Rock Lions

*Member of Board of Directors of Southwest Rehabilitation Center for the Blind.

Club in August, 1945. After thorough study the Club presented the idea to the State Lions Convention in the spring of 1946. After raising \$10,000, \$4,000 of which was contributed by the membership of the Club, and \$6,000 by the business interest of Pulaski County. This money was used to lease and equip the buildings and ground located at 2811 Fair Park Boulevard.

After operating the Adjustment Center for one year successfully, the Little Rock Lions Club submitted this project to the State Lions Committee for Sight Conservation and Work for the Blind and they adopted it as a state project in 1947. Since this Center was the first of this type west of the Mississippi River and second in the United States, it has received National and International recognition.

Representatives of work for the blind in Egypt, Denmark, Greece, Iraq, Korea, India, Thailand, Guam, Turkey, Philippines and others visited the Center to observe training techniques. They were sent here by the United Nations and the Foreign Office Administration of the State Department.

During the twelve years operation, more than 800 blind men and women, representing every county in Arkansas and 121 other places, have graduated from the Center. In 1954, an additional building was constructed to allow for an expanded

program that was needed. On June 20, 1954, Major General Melvin J. Maas, blind retired Marine Corps Reserve Officer, and Chairman of President Eisenhower's Committee for the Physically Handicapped, dedicated the Edward G. Barry Hall at an inspiring ceremony.

Barry Hall is a dormitory for trainees at the Center. The main downstairs room is named the Hugo Norvell Room. Barry Hall is so named in honor of distinguished service to the blind of Arkansas performed by Lion Edward G. Barry, three times chairman of the State Lions Committee for Sight Conservation and Work for the Blind and twice president of Arkansas Enterprises for the Blind.

The Hugo Norvell Room is so named in honor of Hugo W. Norvell, President Emeritus of Arkansas Enterprises for the Blind which he headed for four years, 1945-1949. In November, 1959, a campaign was waged to raise funds to construct all new modern and practical buildings for the Center. The Lions Club raised \$150,000.00 and a \$300,000.00 grant was made by the Federal Government under the Hill-Burton Act. These new buildings are completed and the Center is able to accommodate twice the number of trainees and is the best training center of its kind in the world.

We owe it to our blind patients to tell them of this service and refer them to this organization whether we are in the "eye" field or not.

**A TEACHING SEMINAR
FROM THE
UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE**

Acne Vulgaris

CALVIN J. DILLAHA, M.D.*

and

G. THOMAS JANSEN, M.D.*

Acne vulgaris is a disease so prevalent that it is popularly considered to be a "normal" manifestation of puberty. Nearly 80 percent of adolescents are afflicted at one time or another. Most of us as physicians are called upon regularly to either treat or advise young people with this problem.

Acne as both a physical problem and a cause of emotional disturbance in adolescence should not be minimized. While it may seem an insignificant disorder to one not afflicted, the average teenager is most concerned, and anxious to correct the condition. Therefore, two misconceptions regarding acne should be dispelled from the outset: (1) It is a disease that will be outgrown and (2) it cannot be effectively treated. Both of these popular notions are false. Although many young people with acne will experience spontaneous recovery without treatment, many will not. These individuals will see their acne progress and possibly result in permanent scarring. Of equal importance are the psychic scars that can result from physical disfigurement. Young people find adjustment to adult life difficult at best, without the additional handicap of unsightly eruptions or scars on the face.

It can be stated unequivocally that all cases of acne can be appreciably benefited by *proper* and *persistent* therapy. Any teenager, if willing to cooperate with his physician, can be assured of much improvement within a relatively short period, and in time will experience complete relief.

What is acne vulgaris? It is a disease of the philo-sebaceous apparatus—i.e. the hair follicle and the sebaceous gland.

There are two main pathogenic factors in juvenile acne vulgaris: (1) Sebaceous gland hypertrophy or enlargement (2) Increased keratinization of the follicular or orifice epithelium. These two alterations result in the three clinical manifestations of acne: (1) The amount of sebaceous secretion is directly proportional to the size of the oil gland; therefore, an enlarged sebaceous gland produces more oil and seborrhea or increased oiliness of the skin is present. (2) The increased keratinization of the follicular epithelium results in the accumulation of a mixture of sebum and keratin that blocks the follicular orifice. (3) Inflammation follows the rupture of the follicular epithelium resulting in the typical conical papulo-pustule of acne. Secondary bacterial infection appears to play a minor role in the production of the inflammatory response. It now seems that most of the inflammation results from the irritating effects of the keratin and sebum upon the dermis after escaping from the ruptured follicular duct.

In most patients the inflammatory response is superficial and heals without scarring. For obscure reasons, however, in many patients the inflammation gradually increases in severity and destructiveness. The lesions resulting from this altered reactivity appear as deep nodules, cysts and inflammatory masses and they are termed nodular or cystic acne. When these nodules and cysts are connected by subepidermal sinus tracts the condition is known as acne conglobata, one of the most severe forms. Nodular, cystic and conglobate acne heal with varying amounts of scarring. When hypertrophic scars form the term keloidal acne is used. If the inflammatory lesion does not

*Section of Dermatology, Department of Medicine, School of Medicine, University of Arkansas, Little Rock, Arkansas.

develop, the sebaceous and keratinous material may continue to accumulate and result in a visible comedo or blackhead.

To reiterate the three principal clinical manifestations of acne are: (1) seborrhea or oiliness of the skin (2) the inflammatory papulo-pustular and (3) the comedo. Varying degrees of these three manifestations of the disease along with the altered inflammatory response and healing reaction account for the several clinical varieties of acne.

The sex incidence of acne is approximately 1:1. The sites of involvement are commonly the face, neck, upper back and upper chest, although it may also appear on the arms, lower back, buttocks and legs. The course of the disease is variable, fluctuating spontaneously from week to week. It is fairly common for a patient to experience improvement during the summer months. Many females will observe a premenstrual flare of their acne. Acne may improve or worsen with pregnancy.

Effective and adequate therapy is the result of a combined approach generally incorporating several or many helpful measures and individualized to suit the particular patient. The lack of a specific approach to treatment of acne accounts for much of the confusion and misunderstanding existing today about the disease. Over emphasis on the value of one preparation by zealous drug manufacturers is a common occurrence. The use of any one of these measures to be discussed to the exclusion of the rest will not produce consistent results.

Early therapy is most important, as control of the disease in its early phases will usually prevent scarring. In addition to proper therapy, wholehearted patient co-operation is necessary for best results. The immature adolescent, too young to be truly concerned with his or her appearance, is therefore difficult to treat. On the other hand the older teenager is usually willing and co-operative. This co-operation is essential, as much of the therapy is carried out by the patient at home on a day to day basis, for which he is generally solely responsible. Patient co-operation is usually easily obtained when the nature of acne and the purpose of therapy are carefully explained and outlined to him.

The rational therapy of acne at the present time involves an attempt to relieve the plugging of the follicular orifice by topical measures in combination with small doses of an oral antibacterial agent. A number of antimicrobial agents appear to exert an extremely beneficial effect on the inflammatory process of acne which cannot be explained by the antibacterial properties alone. The most effective agents to date are the tetracyclines and the newer sulfonamides such as Madribon.[®] This therapy is usually over a period of several months, beginning with 125 to 250 mg. of tetracycline or 0.5 gm of Madribon[®] daily. With improvement, this dosage may be administered every other day or twice a week. It has been adequately demonstrated that such therapy can be continued over a period of months to years with only an occasional minor side effect. While this type of oral medication has produced a tremendous advance in acne therapy it has not replaced topical therapy.

Relief of follicular plugging is still best accomplished by topical measures. These include: (1) Sulfur precipitate and keratolytics such as resorcin in varying concentrations and vehicles; either lotion, cream, ointment or powder according to the individual requirement. The use of sulfur is empirical, but its beneficial effects are undoubted. Proprietary preparations are helpful in some instances, but will not produce uniform improvement in a large group of patients as the concentration of active ingredients cannot be varied to suit the individual needs. One cannot overemphasize the value of the proper use of the keratolytic-sulfur preparations. A drying soap, manual expression of comedones with a Shamberg comedo extractor and proper care of the scalp are valuable adjunctive measures. Chlor-thiazide given daily for five to ten days before the onset of the menstrual period may prevent troublesome premenstrual flares of acne seen in some women. The use of x-ray therapy, topical and systemic estrogens, thyroid, vitamin A, progesterone, and bacterial vaccines in the treatment of acne has lost many of its advocates and these measures are now infrequently prescribed.

The role of diet in acne is in need of

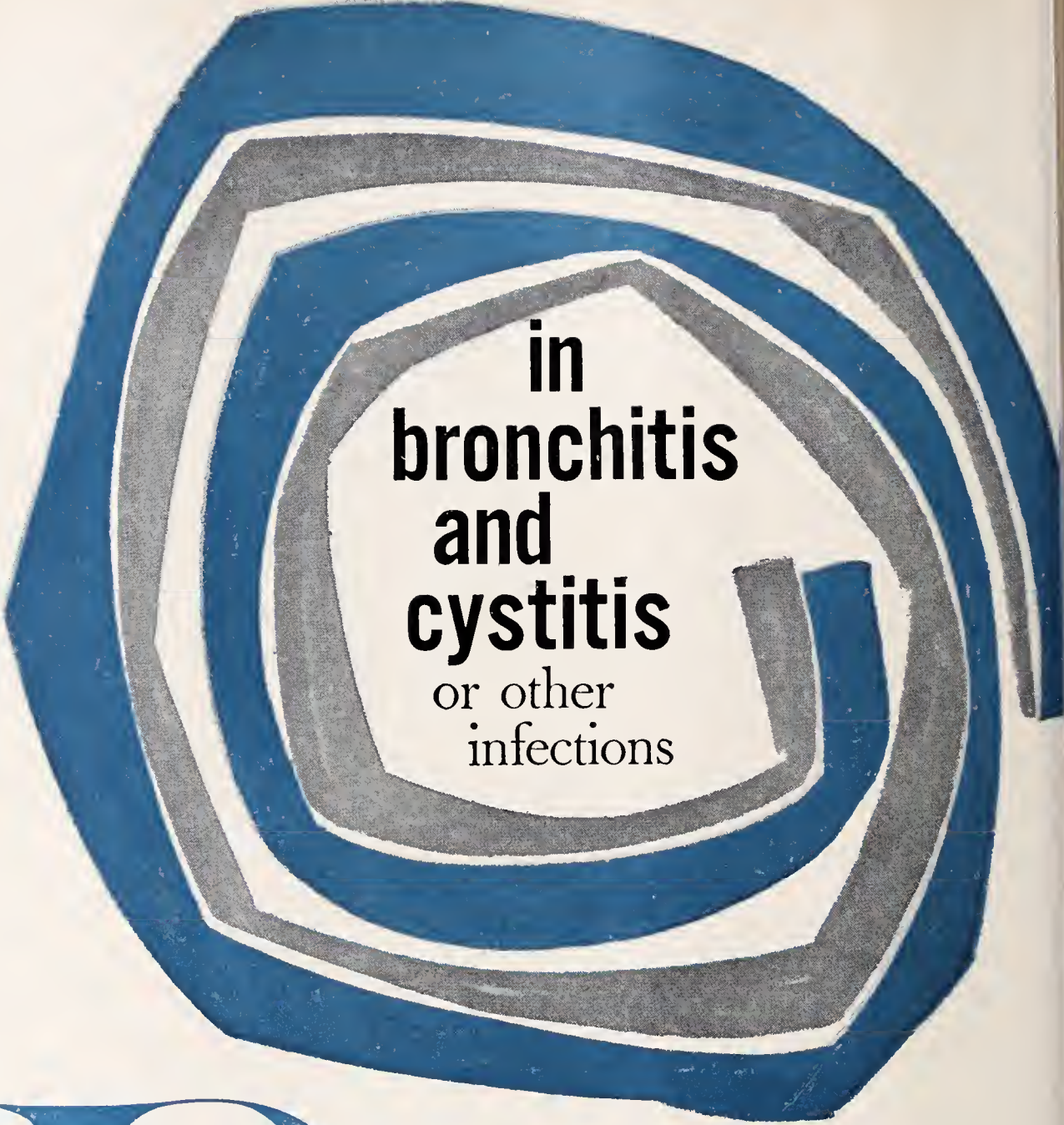
further study. Certainly diets rigidly restricting carbohydrate and fat intake are of no value. Furthermore, recent experimental studies with foods usually considered to aggravate acne including chocolate, cola drinks, nuts, seafood, cheese, etc., indicate that they may not play as an important role in the acne process as formally believed. The popular vitamin with mineral preparations that include potassium iodide or vitamin B12 are frequently found to aggravate and precipitate acne and should be omitted in the patient with acne vulgaris. Other drugs containing halogens and cobalt should also be avoided.

Many types of therapy have been advocated for acne and many more will undoubtedly be introduced before the effective specific therapy is found. Nearly any type of therapy will appear to help in

some cases, since acne is one of those diseases in which spontaneous fluctuation of the process is the rule. It is, therefore, worthwhile for us to be cautious in evaluating the response of a particular patient to therapy. Evaluation of any new therapy for acne must be on large groups of patients with carefully controlled observations.

The all-important sequela of acne is, of course, scarring. In recent years abrasive surgery has been popularized as a means of treating acne scars. The initial enthusiasm for this procedure has waned, but with accumulated experience with large numbers of patients it can be concluded that surgical planning is of definite benefit in carefully selected patients.

In summary, the present concepts on the pathogenesis and therapy of acne are briefly reviewed.



in
**bronchitis
and
cystitis**
or other
infections

D antibiotic therapy with **DECLON**


CAPSULES, 150 mg., 75 mg. *Dosage*: Average infections—150 mg. four times daily. Severe infections—Initial dose of 300 mg., then 150 mg. every six hours.

PEDIATRIC DROPS, 60 mg./cc. in 10 cc. bottle with calibrated, plastic dropper. *Dosage*: 1 to 2 drops (3 to 6 mg.) per pound body weight per day—divided into four doses.

SYRUP, 75 mg./5 cc. teaspoonful (cherry-flavored). *Dosage*: 3 to 6 mg. per pound body weight per day—divided into four doses.

PRECAUTIONS—As with other antibiotics, **DECLON** may occasionally give rise to glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis or dermatitis. A photodynamic reaction to sunlight has been observed in a few patients on **DECLON**. Although reversible by discontinuing therapy, patients should avoid exposure to intense sunlight. If adverse reaction or idiosyncrasy occurs, discontinue medication.

Overgrowth of nonsusceptible organisms is a possibility with **DECLON**, as with other antibiotics, and demands that the patient be kept under constant observation.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York 

added measure of protection

MYCIN[®]

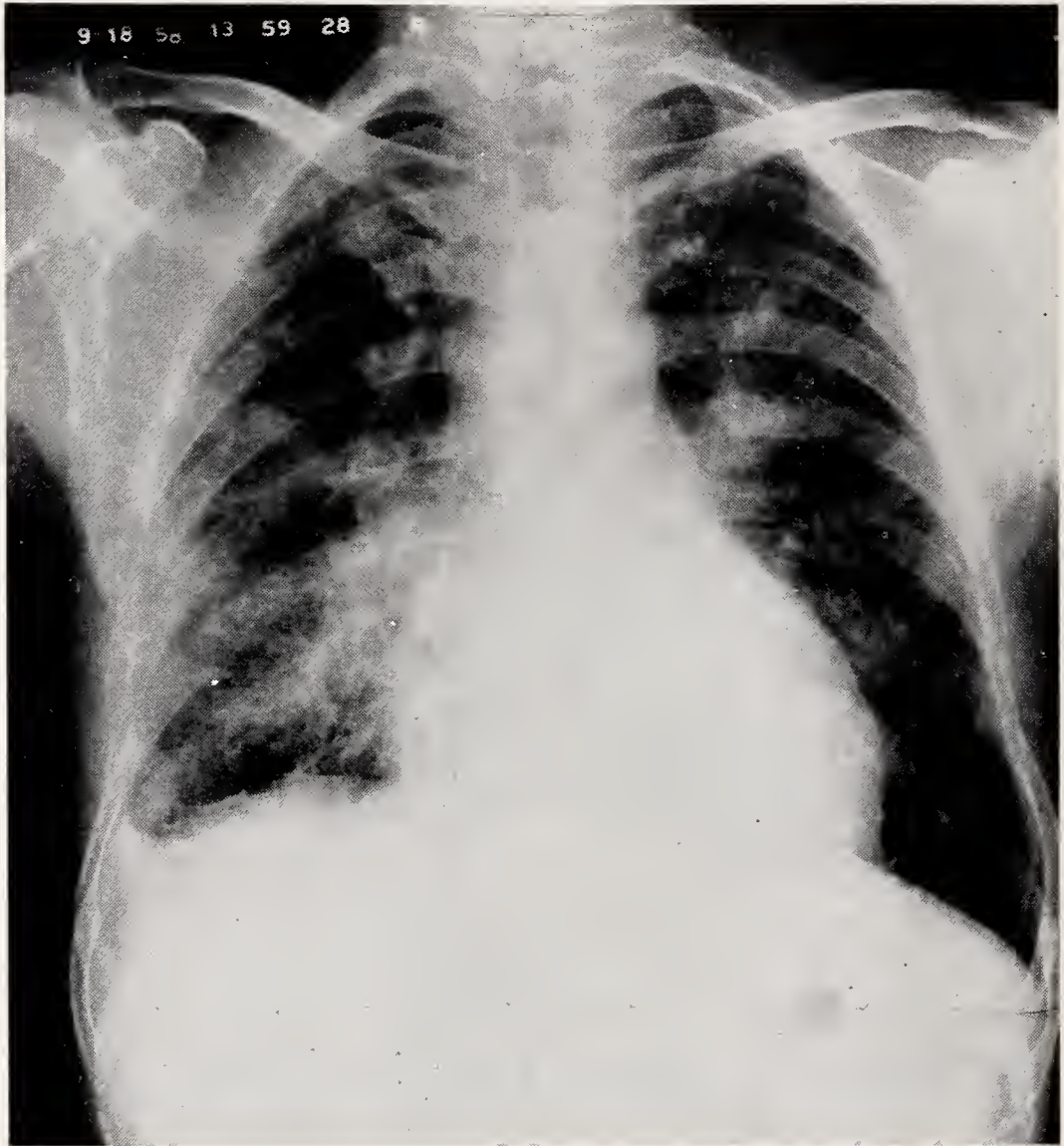
DEMETHYLCHLORTETRACYCLINE LEDERLE

against relapse—up to 6 days' activity on 4 days' dosage

against secondary infection—sustained high activity levels

against “problem” pathogens—positive broad-spectrum antibiosis

What Is Your Diagnosis?



From Radiology Dept., University of Arkansas Medical Center.

FOR ANSWER SEE PAGE 264

Arkansas Public Health at a Glance

The Civil Defense Emergency Hospital

Arkansas now has 17 Civil Defense Emergency Hospitals located at 17 strategic points

WHAT IS IT?

The Civil Defense Emergency Hospital (CDEH) is a functional and relatively complete 200-bed general hospital, requiring a staff of: 18 Physicians, 3 Administrators, 33 Nurses, 5 Anesthetists, 2 Pharmacists, and 118 Trained Aides.

It is designed to function within an existing structure such as a school building, community center, or church building which has been pre-selected by competent local authorities. Such structures should permit separation of wards, operating room and other functional sections. The hospital is organized to function independently or in conjunction with existing hospitals.

WHY HAVE IT?

It is estimated that 80 percent of the 1,500,000 beds available in the United States would be destroyed or made unusable as a result of a mass attack. CDEH units today could provide approximately one-half of the total available hospital beds in the event of such an attack. The primary mission of the CDEH is to become the core of the post-attack hospital system which is essential to providing medical care for the surviving population.

HOW MANY ARE THERE?

The Federal Government has purchased nearly 2000 CDEH units at a cost of nearly \$26,000 each. About 1600 have already been prepositioned throughout the United States; 200 are reserved for the Federal health stockpile; and 200 are available to the states for training purposes. The 87th Congress has authorized the purchase of 1000 new Civil Defense Emergency Hospitals for fiscal year 1962.

WHAT DOES A CDEH INCLUDE?

The Emergency Hospital is divided into eight basic functional sections includ-

ing: a laboratory capable of performing 25 routine standard clinical tests; a pharmacy containing antibiotics, heart and respiratory stimulants, intravenous solutions, and other drugs; a quick-reading X-ray unit; operating room equipment containing five operating tables, three operating lamps, three anesthesia apparatus and a limited amount of expendable surgical and medical supplies to operate for 36 to 48 hours. These new hospitals will have a 30-day supply of all expendable items.

A limited supply of medical and administrative records are included; additional record supplies will have to be supplied or developed locally. Hospital staffs and operating manpower also will be drawn from local sources.

Each hospital also has a 15 KW generator to provide auxiliary power if the local electrical supply is disrupted, and a 1500 gallon water tank and pumping unit for emergency water supply.

HOW IS IT STORED?

The Emergency Hospital is packed in approximately 360 crates to facilitate transportation, handling, and long-term storage. It weighs a total of 24,000 pounds and requires 2000 cubic feet of storage space. Altogether, there are 8000 individual pieces included in the 290 different items of supply and equipment.

It is possible to erect the entire hospital with 120 man-hours of labor, in a floor area of 15,000 square feet.

While speed of setting up the hospital is not a criterion of its usefulness, it is an indication of its simplicity and functional design.

WHAT ABOUT TRAINING?

One complete Emergency Hospital has been placed in a large van trailer by the State Civil Defense Agency in Conway, Arkansas. This particular Hospital is used for demonstrations and training pur-

FEATURES

poses. Requests for use of this training unit are coordinated through the Hospital Division, State Health Department, Little

Rock, Arkansas.

ARKANSAS STATE
BOARD OF HEALTH

EMERGENCY HOSPITAL LOCATIONS

- Dumas — Desha
- Forrest City — St. Francis
- Camden — Ouachita
- Berryville — Carroll
- Russellville — Pope
- Harrison — Boone
- Warren — Bradley
- Benton — Saline
- Heber Springs — Cleburne

- El Dorado — Union
- Hope — Hempstead
- Newport — Jackson
- Conway — Faulkner
- Camp Robinson — (Training Hosp.)
North Little Rock
- Clarksville — Johnson
- Texarkana — Miller
- Jonesboro — Craighead



PROPOSED SITES FOR ADDITIONAL UNITS

00 Little Rock—Pulaski (Calculated Risk Sites)

Chronic Ulcerative Colitis

ALFRED KAHN, JR., M.D.

Chronic idiopathic ulcerative colitis is caused by an unknown agent. It has a distinctive pathology when compared to regional enteritis; the former consists of punched out ulcers in an intensely inflamed bowel; the ulcers tend to be superficial and there is a tendency to pseudopolyp formation; lymphangitis and lymphoid hyperplasia are minimal. In regional enteritis there is marked lymphangitis and lymphoid hyperplasia with granulomas and intermittent involvement of areas of the stomach, small bowel and colon, although they are not all invariably involved (T. C. Laipply, *Journal of the American Medical Assn.*, Vol. 165, p. 2052, Dec. 21, 1957).

Kirsner and Goldgraber (*Annals of Internal Medicine*, Vol. 47, p. 939, Nov. 1957) have recently reported on some specific diseases which simulate chronic ulcerative colitis. They have listed four examples:—lymphopathia venereum, acute vasculitis, scleroderma and secondary amyloidosis. Other diseases are recognized for resembling idiopathic ulcerative colitis; they are tuberculosis, bacillary dysentery

and amebiasis.

Goldgraber and Kirsner speculate that idiopathic ulcerative colitis may be a non-specific response to many types of injury.

The treatment of ulcerative colitis is far from satisfactory. Unquestionably, one of the most important facets of therapy is relief of the emotional tensions that plague these patients. This type of superficial psychotherapy is probably best handled by the family physician. Exacerbations of ulcerative colitis can be temporarily correlated with anxiety, frustration, fear, etc., (J. B. Kirsner, *Archives of Internal Medicine*, Vol. 101, page 3, Jan. 1958). Sedation is often invaluable in the treatment of these patients. Antispasmodic drugs are used without great success. Sulfonamides, antibiotics and supportive fluids and vitamins are helpful. When cases become unmanageable medically, surgery is necessary. This is necessary in about 15 percent of the cases. The operation of choice is total colectomy. Patience in treating these cases is most necessary. Striking remissions often occur.

MEDICINE IN THE NEWS

Dr. Martin C. Hawkins' Plan Concerning New Ideas for Worldwide Doctor Participation in Cancer Research*

INTRODUCTION:

Someone, somewhere, holds the key to the lock of the treasure chest where the solution to the cancer problem is hidden.

Many of our lone, practicing physicians in remote areas around the world undoubtedly have made important observations relative to the etiology and treatment of cancer, as well as other diseases. The tragedy herein lies in the fact that in many instances these experiences and ideas are never brought to light, either because of the lack of opportunity or know-how, or because they were not recognized as being important, or that occurrences of significant clues were so rare as to be considered coincidental.

All of you are familiar with medical discoveries made in unexpected places by alert, observing men with fruitful imaginations. The discovery of smallpox vaccine, quinine for the treatment of malaria, and curari for use in anesthesia are examples of a few of the many previously unplanned discoveries.

I. PURPOSE

The purpose of THE HAWKINS PLAN is to gather the observations and experiences of men of science, throughout the world, who have crossed swords with the disease of cancer. I wish to emphasize that it is simply actual observations and experiences relative to cancer which I am hopeful of getting, and not deductions. Deductions and conclusions will be made by expert teams from a study of all the material after it is classified. In short, that of real value would be new material which has not been run through the mills of the research laboratories. The breakthrough in the cancer problem quite possibly will come from a heretofore unknown person or source.

*Presented 12 April 1961 in St. Louis, Missouri, before the Southwestern Surgical Congress during its 13th annual meeting by Martin C. Hawkins, Jr., M.D., Vice-President of the Southwestern Surgical Congress, F.A.C.S., Hawkins Clinic Hospital, Searcy, Arkansas.

A. PLAN

1. All practical means of communication should be utilized.
2. Initially, the predominating health agency in each country would be contacted and urged to invite and encourage doctors throughout their respective countries to express themselves in writing, relative to any observations or experiences which would in any way concern the etiology or therapy of cancer. It would be expected that the heads of these health agencies would in turn contact medical organizations and teaching institutions to solicit their aid in bringing the plan before the doctors.
3. The doctor participants would be instructed to forward their written contributions to the governing health agencies in their respective countries. These health agencies then would forward the submitted material to a designated central location in the United States.
4. Translation of all submitted writings from the various doctors in the various countries would then be made into English. The author suggests that this could best be done by utilization of electronic computers.
5. Material then would be distributed on a voluntary basis among medical schools, where senior students, interns and residents would agree to sort and classify the material according to a prescribed formula.

B. FORMULA FOR CODING

RELATIONSHIP OF CANCER TO:

Altitude, Animals, Chemicals, Communicability of cancer, Diet, Drugs, Endocrine system, Environment, Family, Family immunity, Fish, Geographical location, Incidence in cancer surgeons, Individual immunity, Insects, Other diseases, Plants, Races, Racial immunity, Sexual practices, Sewage disposal, Synthetic hormones, Tobacco worm, Water supply, Weather, and Other categories that may develop in the course of the study.

The sorted and classified material will then be collected from medical schools, coded by an electronics expert, and processed by an electronic computer.

Resulting data will be available to all cancer research teams.

It is planned that co-operation and participation with related agencies, including the following, will be sought:

- The Department of State
- The National Academy of Sciences
- The National Institute of Health
- The Pan American Health Organization
- The International Co-operation Administration

The United Nations Educational, Scientific and Cultural Organization

The United States Department of Health, Education and Welfare

The World Health Organization

If THE HAWKINS PLAN captures your imagination or proves to be thought-provoking, the author would appreciate hearing from you.

Cancer in Veterans Administration Hospitals

Veterans stricken by cancer are being treated in Veterans Administration hospitals at the rate of some 30,000 per year. Somewhat more than half are new cases of the disease. In about 40 percent of these, the cancer has been discovered at an early stage, while it is still localized and cure is likely.

The lungs are by far the most frequent location of cancers among newly diagnosed VA patients, the skin is second, and the prostate gland is third.

These are a few of the cancer facts just becoming available from the VA Central Cancer Registry, which is the first nationwide registration of cancer patients designed to obtain epidemiological and survivorship information over a period of at least five years.

Eventually, the registry will show the results of different kinds of treatment and thus will be of much value in selection of the most promising treatments for wider use and further development. The information also will provide the basis for studies of rare forms of cancer about which little is known at present.

Of the VA's 170 hospitals, 124 are reporting on all their cancer patients and the others are reporting a 20 percent sample. On this basis the 170 hospitals reported 26,245 cases of cancer during

1958. VA statisticians estimate the number would have been about 32,000 if all the hospitals had reported all their cancer cases. Surgery was the most frequently used treatment for these patients. Radiation was often the form of therapy for cancers in selected areas of the tongue, pharynx, esophagus, and respiratory system. Chemotherapy was most often given for palliation to patients with malignancies of the small intestine, respiratory system and lymphatic and blood-forming tissues. Hormone therapy was given to patients with cancers of the breast and genital organs.

Regional Seminar Conducted In Dumas by AAGP

The Arkansas Academy of General Practice arranged a regional postgraduate seminar at Dumas. The meeting was held in the Fellowship Hall of the Methodist Church and speakers were Dr. Richard Ebert, Professor of Medicine at the University Medical Center, Little Rock, and Dr. Fred Allison, Chief of the Infectious Disease Service at the University of Mississippi Medical Center, Jackson.

Paragould has first-rate Hospital

Paragould and Greene County, blessed with a number of good physicians and a first-rate hospital are a great deal more fortunate in those respects than many areas of the world, even some in our own country.

The local telephone directory of Paragould lists 13 physicians and this means about one for every 2,000 residents in the county. Of course, in the eastern part of the U.S. the ratio of doctors to patients is around 900 to 1, but in other sections it is much higher than the ratio at Paragould. It reaches an almost unbelievable figure of about 100,000 to 1 in some parts of the world. There are towns of 5,000 or more population within a 100 mile radius of Paragould who have only one or two MD's.

On top of that, experts predict that the shortage of doctors in this country will become much more severe within the next few years, if medical school enrollments do not increase sharply.

In the face of all that, why should Paragould be so "lucky"? There are sev-

ral reasons. One of the best explanations as one local physician puts it is the Community Methodist Hospital. Indications are that many towns similar in size to Paragould lack the hospital facilities. Why?

Paragould physicians point out several very good reasons—one being the interest of the community in its hospital facilities, as evidenced by a large and active hospital auxiliary which has done a great deal toward improving the hospital. For the past 11 years, the auxiliary has worked tirelessly to raise money, by whatever means possible to provide hospital care for the needy. Originally, their goal was to get the Community Hospital off to a good start, and once that goal was reached, the auxiliary turned to helping charity patients, and volunteers still go to the hospital to perform many thankless jobs which would otherwise go undone or become drains on the hospital's finances.

After the hospital got on its feet, rigid standards were set up for the kind of work done. Adherence to these standards has made Community Methodist Hospital one of the mere 40 accredited hospitals in the state. Many more than that number have not received accreditation.

Ten local physicians make up the active board at the hospital, with specialists from Jonesboro and Memphis on the consulting staff. As an example of the care with which things are done at the hospital, every piece of tissue removed from a patient is sent to a pathologist in Memphis to be examined. Another example is the system used when new physicians ask to be allowed to practice there. They go through a thorough examination by the hospital board, then are put on a "limited privileges" basis for a period of time, during which the board oversees their work. Then they are passed if they are "up to snuff." Too, any physician who is guilty of medical misconduct at the hospital can be dismissed by the board of doctors and the hospital board.

Going hand-in-hand with that attitude of protectiveness toward the patient is another trait which prospective new doctors heartily approve, an almost complete lack of professional jealousy between members of the medical profession in Paragould.

That, and an open-minded attitude by hospital officials, helps make Paragould a

desirable place for a medical school graduate looking for a place to set up business. Of course there are other considerations—whether or not there are enough patients to provide a decent living for the newcomer, nearby specialists and high-standard facilities, good schools and abundant nearby recreational facilities to name a few. Things were not always so good, as the older medical practitioners can well testify, but Paragould and Greene County now seem indeed to be "medically wealthy."

Medical Exams for 7th Graders

The Pulaski County Medical Society again this year cooperated with the Little Rock public schools in making possible medical examinations for all seventh graders. Each year, students finishing the sixth grade, are given examination forms to be completed by their family physician prior to the beginning of the fall term when they enter the seventh grade.

Last year, 330 out of a total of 1,717 seventh graders were unable, primarily because of financial hardships, to have these physicals by private physicians. They were examined at school clinics by members of the Pulaski County Medical Society who volunteered to provide this service. After the examinations are made, lists are compiled by the school nurse showing the physical defects discovered. These lists are used by the medical society in getting corrections for defects on those who are medically indigent. The lists are made available to the classroom teachers so that they may be acquainted with defects or abnormal health conditions which would help in understanding and meeting the needs of the individual student. The lists are confidential for teachers and school nurses.

Dr. G. Max Thorn, Chairman of the Medical Society School Health Committee was coordinator for this service this year.

Hospitals Most Frequently Cited as Place of Residency Training by Full-Time and Part-Time Faculty Members in U. S. Medical Schools

This year we published a Datagram which discussed the relative standing of medical schools as teacher-training insti-

tutions. It was based on information derived from the Faculty Registry. The presentation was divided into two parts—"Full-Time Faculty Members by School of Graduation" and "Top 25 Schools in the Proportion of 1934-58 Physician Graduates Holding Full-Time Faculty Appointments at U. S. Medical Schools."

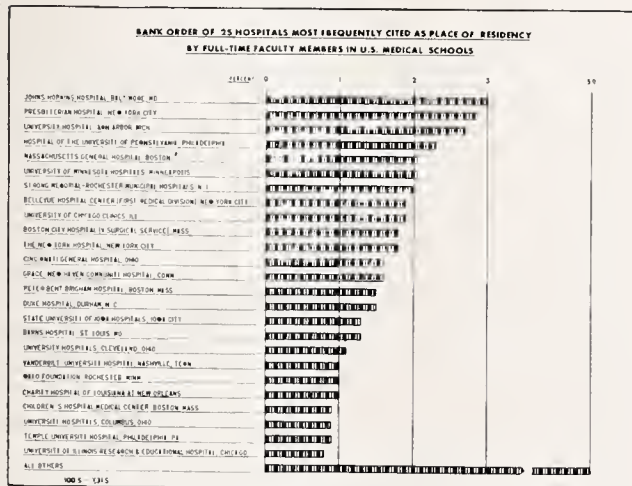
This particular issue of Datagrams stimulated unusual interest from the number of requests for reprints and the volume of related correspondence.

In this issue we have attempted a similar presentation showing in rank order the proportion of U. S. hospitals most frequently cited by medical school faculty personnel as the place of residency training. Residencies fulfilled in foreign hospitals were not considered in the computations.

The presentation for full-time faculty members is shown below in Figure 1.

Among the full-time physicians listed in the Faculty Registry, approximately 7,000 furnished information covering residency. Of these, the largest proportion cited Johns Hopkins as the place of residency training. Three percent of the full-time teachers completed a residency in this hospital.

Figure 1



Listed in descending order according to the proportions of teaching personnel which cited them as the place of residency are the following hospitals: Presbyterian, New York City; University, Ann Arbor, Michigan; U. of Pennsylvania; Massachusetts General; U. of Minnesota, Strong Memorial, Rochester, New York; etc. About 41% of all full-time faculty members reporting, completed a residency in one of the twenty-five hospitals listed in Figure 1.

Similar information pertaining to part-

time faculty members is shown in Figure 2. Percentages are based on a total of more than 23,000 part-time faculty members who furnished information covering residency.

Here, Mayo Foundation was the most frequently cited as the place of residency training of the part-time faculty members. Approximately 2% of the part-time teachers completed their residency in this institution. Other hospitals ranked at the top of the list are: Bellevue-Columbia (1st Medical Division); Los Angeles County; Presbyterian, New York City; Johns Hopkins; Cook County, Chicago; U. of Pennsylvania; Charity Hospital, La.; Boston City (Fifth Surgical Service); etc. Almost 30% of the part-time faculty held residencies in the twenty-five hospitals listed in Figure 2.

We had hoped to relate the number of teaching personnel according to their place of residency training to the total number of residency positions filled in each hospital over a specific twenty-five-year period. This would have lessened somewhat the advantage of the larger and older hospitals in rank order positions. However, it was impossible to obtain the necessary information to complete the analysis.

Figure 2



Medical Education Making Strides

The sharp warnings issued by well-known medical educators that we must rapidly increase the number of medical school graduates and establish at least 20 new schools in order to produce 3,600 additional physicians a year by 1975 in order to maintain the present physician-population ratio, are beginning to yield some tangible results.

Rutgers and Brown Universities have announced plans are underway to offer two-year programs in the basic medical sciences.

The University of New Mexico is fast making strides toward starting a two-year program in the basic medical sciences by appointing as dean, Dr. Reginal H. Fitz, associate dean of the University of Colorado School of Medicine.

San Antonio, Texas won a long-sought drive to locate a medical school in that city recently when a deed for 100 acres of land for the school was presented to the University of Texas. Formal ceremonies dedicating the grounds to the construction of a medical center were held Aug. 19, with Dr. Joseph C. Hinsey, director of the New York-Cornell Medical Center being one of the principal speakers. The state legislature has appropriated \$1.85 million to begin the medical school.

While states such as Maine, Massachusetts, Michigan, Minnesota, Idaho, Ohio, and New York are studying the possibilities of establishing new medical schools, the Connecticut Legislature went into action by appropriating \$2 million to help start a new medical-dental school to be affiliated with the University of Connecticut. This amount, coupled with a \$1 million grant from the Kellogg Foundation, will enable the university to actively start work on the four-year medical school.

The University of Arizona has been selected by the Board of Regents as a medical school site, "if and when funds are available."

Latest reports from California reveal that the Board of Regents of the University of California have under serious consideration plans for a four-year medical school for the proposed new university campus at San Diego.

The Month in Washington

WASHINGTON — The Senate and House approved a multi-million dollar expansion of federal aid to community health services.

The Senate approved it by routine voice vote a few weeks before adjournment. The House earlier had approved a slightly different form of the legislation. No difficulty was anticipated in adjusting the

differences of the two versions so that it could become effective at an early date.

Some of the programs covered by the legislation were of special importance to the aged and the chronically ill. Key provisions of the bill would:

—Raise from \$30 to \$50 million, for five years the annual authorization for matching grants to states and cities for public health services such as home nursing, home health care and a variety of services to nursing homes.

—Establish a five-year \$10 million-a-year program of special grants to non-profit groups for research and development aimed at improved health services given outside the hospital.

—Raise from \$10 million to \$20 million the annual authorization for construction of public and non-profit nursing homes.

—Extend loan provisions for hospital construction under the Hill-Burton Act until its grant program expires in June 1964.

—Raise from \$1.2 million to \$10 million the annual ceiling on grants for hospital research and permit grants for experimental or demonstration hospital units.

—Extend for three years the matching grant program which provides federal help for construction of health research facilities and authorize \$50 million rather than \$30 million a year.

Influenza Epidemic Predicted

Dr. Luther L. Terry, Surgeon General of the U.S. Public Health Service, predicted that there will be a new influenza epidemic in the United States this fall and winter.

He urged immediate vaccinations for people over 65, pregnant women and persons with heart diseases and other chronic illnesses.

"We are probably due for some Asian flu outbreaks, since they come in two or three year cycles," Terry said, "and we are overdue for type B flu outbreaks which come in four to six-year cycles."

More than 86,000 people in the three most susceptible groups died from influenza between September 1957 and March 1960. Asian flu has been dormant in this country since then. It has been more

than six years since type B flu has been widespread.

Both types of flu were prevalent in other countries in 1960-61, especially in England. In 1951, when England had a similar epidemic, flu reached this country the following year, Terry noted.

The U.S. Public Health Service is alerting physicians, state health officers and welfare agencies to include flu shots in their programs of public assistance.

Live Virus Polio Vaccine Licensed

The Type I oral, live virus polio vaccine developed by Dr. Albert Sabin has been licensed by the U.S. Public Health Service for marketing in the United States.

However, the PHS, the American Medical Association and others urged that the widest possible use still be made of the Salk killed vaccine. The principal use of the newly licensed oral vaccine this year will be against epidemic threats of Type I polio.

The license for manufacture of the oral vaccine was granted to Pfizer, Ltd., Sandwich, England, and it is being marketed in this country by Chas. Pfizer & Co., Inc., of New York.

Dr. Luther L. Terry, Surgeon General of the PHS, said he expected Type II oral vaccine to be licensed soon but that it would be several months before Type III would be licensed.

Pfizer is expected to have more than 50 million doses of the Type I oral vaccine available for use by next spring at the start of the 1962 polio season. For an epidemic reserve, the PHS ordered at the time of the licensing a total of 900,000 doses of the Type I vaccine in frozen form at a cost of \$81,000.

Information on the terms for obtaining vaccine from this epidemic reserve was sent to State and Territorial Health Officers. The requirements include:

At least three cases of Type I polio in the community within a month, of which two have been confirmed to be Type I by laboratory analysis.

Adequate community organization and medical leadership to insure rapid and complete coverage of the population under 50.

Agreement to make the vaccine available without charge to persons under 50.

All local requests must be channeled through State Health departments.

Of the three types of polio virus, Type I has been responsible in recent years for between 60 and 70 percent of all paralytic polio in this country, PHS said. However, a sampling of virus isolated from paralytic cases this year suggests that Type III may be increasing in relative importance as a cause of paralytic disease.

Dr. Terry attributed "the progressive decline in polio since 1955" to the Salk vaccine. He said that through Aug. 5 only 234 paralytic cases had been reported this year, as compared "with 13,850 for the polio season of 1955, the first year in which the Salk vaccine became available in limited quantities."

The A.M.A. said the licensing of the live virus vaccine marked "another step forward" in the fight against polio. The Association predicted the new vaccine would be 'a valuable weapon against epidemics of Type I polio.' However, the A.M.A. again urged that everyone complete a series of Salk shots.

"Until such time as oral vaccines against all three types are available, the Salk vaccine remains the only protection available against all types of paralytic polio," the A.M.A. said.

AMA View on Voluntary Health Agencies Discussed

The attitude of the American Medical Association toward voluntary health agencies was discussed by one of the AMA's officers at a 13-state meeting in Little Rock. Dr. Raymond M. McKeown of Coos Bay, Oregon, — Secretary-Treasurer of the national physicians' organization spoke before about 400 delegates attending a joint meeting of the Southern Tuberculosis Conference and the Southern Thoracic Society.

This is the second time in the 47 years of the joint meetings that the delegates have come to Arkansas. Robert H. Schnee of Little Rock, executive director of the Arkansas Tuberculosis Association was the Conference program chairman. Judge Ernest E. Mason of Pensacola, Fla. is president of the Conference.

After the general meetings, the dele-

gates divided into discussion groups to discuss topics of special interest. A highlight of the conference was a showing of the National Tuberculosis Association's new film, "Merry-Go-Round."

Medico-Legal Questions

It has been suggested that the Journal inaugurate a section devoted to medico-legal questions and answers. Mr. Eugene Warren, as counsel for the Arkansas Medical Society, has agreed to answer inquiries from the medical profession involving medico-legal problems. Questions may be addressed to the Journal for inclusion in this section. If you desire to address your question directly to Mr. Warren, please specify that it is to be answered in the journal.

Radioactive Fallout Due to Russian Nuclear Testing

Evidence that radioactive fallout from the Russian resumption of nuclear weapons testing is falling on the United States was announced by Secretary Abraham Ribicoff of Health, Education, and Welfare.

The Public Health Service Arctic Health Research Center at Anchorage, Alaska, reported that preliminary analysis of air samples taken Tuesday, September 5, showed a radiation level of 7 micromicrocuries per cubic meter of air, 35 times the average daily levels of .2 micromicrocuries during August, said Secretary Ribicoff.

Dr. Luther L. Terry, Surgeon General of the Public Health Service, said that no immediate health danger exists in the increased fallout. He also said that, while he has no question of the fact that the sample shows fallout from Russian weapons testing, as a matter of scientific practice the analysis will be rechecked.

Dr. Terry pointed out that the 7 micromicrocurie level reflected in the reading from the Alaskan test station is well below human tolerance levels, and considerably lower than levels reported from Alaska on numerous occasions prior to the test moratorium in the fall of 1958.

The Surgeon General also said that the Public Health Service has tightened all of its radiation surveillance, but a complete picture of the effect of the Russian

testing will not be done for several months.

The 45 radiation stations that sample air and rain or snow (first indicators of fallout) have been put on around-the-clock monitoring duty and asked to report within three hours any sample that shows a ten-fold increase above average radiation levels. In ordinary practice, air and rain is monitored on an 8-hour, 5-day-a-week basis.

The 60 milk sampling stations have also been alerted to report any change in the iodine-131 content of milk. The first indication that Americans may be absorbing more radiation because of the Russian weapons testing program is expected to show up in higher amounts of radioactive iodine.

The 90 water sampling stations have been ordered to make radiation analyses of water samples on a weekly rather than, as previously, monthly basis.

Secretary Ribicoff said that tests show that the Russian resumption of atmospheric tests comes at a time when the test network has found radiation levels continuing to decline in water, air, milk, and other foods.

Mr. Ribicoff mentioned the following data on low, peak, and current radiation levels:

Milk

Milk has been measured for radioactivity longer than any other product and therefore shows most clearly the effects of fallout. Data from the first 12 raw milk sampling stations established in 1957 (there are now 60) averaged 9 micromicrocuries of strontium-90 per liter of milk in 1958, went up to 13 in 1959, and was back to 9 in the first quarter of 1961. Iodine-131 in milk averaged a high of 300 micromicrocuries per liter in late 1957, went down to 40 by the end of 1958, and in the first quarter of 1961 was below accurate measurement levels, i.e., less than 10 micromicrocuries per liter.

Wheat

The strontium-90 count from the 1958 wheat crop from nine wheat producing States averaged 62 micromicrocuries per kilogram. Analyses of the 1960 wheat crop showed the average level had gone down to 25 micromicrocuries per kilogram.

Air

Levels of gross beta radioactivity in air

decreased from an average of 12 micro-microcuries per cubic meter of air in November 1958 to a level of less than 0.1 micromicrocuries per cubic meter in May 1961. These data show the national average based on collections from 47 air sampling stations located in all parts of the country.

Water

For the last three years radioactivity levels in streams have been falling steadily. The maximum level of gross beta activity found in 1957-58 was 1334 micromicrocuries per liter while the highest found during the past year in streams not affected by uranium mining or production was 451. The latest reports include data collected from about 90 stream sampling stations throughout the United States.

"The primary usefulness of the field estimates of radioactivity in air is the early warning they can provide of possibly significant changes. When estimates reported by field stations are less than 10 micromicrocuries per cubic meter of air immediately following nuclear detonations they are not considered significant. However, when changes of 10 or more micromicrocuries are reported these are considered sufficiently large and accurate to warrant further study of the data and their possible significance."

"The people of the United States and the world should realize the magnitude of the action taken by the Soviet government in ending the moratorium on nuclear bomb tests," said Secretary Ribicoff. "If the Soviet Union continues atmospheric tests, it is clear that the downward trend of the past three years will be reversed. Then this Nation and people throughout the world will again face the threat of radiation damage in the air we breathe, the water we drink, and the food we eat."

ANNOUNCEMENTS

"American College of Allergists Graduate Instructional Course and Eighteenth Annual Congress, April 1-6, 1962, Hotel Radisson, Minneapolis, Minnesota. For

further information, write to: John D. Gillaspie, M.D., Treasurer, 2141 14th Street, Boulder, Colorado."

Dr. Luther L. Terry, Surgeon General of the Public Health Service, announced that a contract has been signed with the General Electric Company for the development of an electronic information storage and retrieval system at the National Library of Medicine, to be known as MEDLARS (Medical Literature Analysis and Retrieval System.)

The new computer-based system will enable the National Library of Medicine to broaden and accelerate its services to medical education, research and practice. The Library, which this year observed its 125th anniversary, is responsible for acquiring, indexing, storing and disseminating world literature relating to the medical sciences, and constitutes the largest collection of scientific medical literature in the world.

Obituary

Dr. Frank Gordon, 82, manager of VA Hospital from its opening in 1934 until his retirement in 1949, died at a local hospital in Fayetteville following a brief illness. Dr. Gordon was born April 12, 1879 at Savannah, Ga., the son of Edward C. and Mary Bell Gordon. He was graduated from Westminster College at Fulton, Mo., and Washington University Medical School at St. Louis. He was a member of the American Medical Association and a Fellow of the College of Physicians, a member of F. and A.M. and the Valley of Fort Smith Consistory. Dr. Gordon moved to Fayetteville from Dayton, Ohio 27 years ago when he became manager of the hospital. He was a member of the Presbyterian Church where he had served as elder for many years. A veteran of World War I, he served as Major with the 358 F.A. Hospital with the 90th Division. He was married to Louise Eisman June 8, 1925 at St. Louis Missouri.

PERSONAL AND NEWS ITEMS

Dr. Miller's Crusade

An Arkansas doctor, who once served as a medical missionary in the Far East and in recent years has made two visits to the primitive San Blas Indians in the Republic of Panama is starting a crusade.

Dr. John H. Miller of Camden wants his fellow physicians to devote a period of time helping peoples of underdeveloped countries. He will make his first talk on the subject when he addresses the Ouachita County Medical Society.

Dr. Miller and **Dr. James Sawyer** of Benton, a dentist, spent two weeks doing medical missionary work among the San Blas in a reservation area time almost forgot. They went to Panama under the auspices of the Brotherhood Commission and Home Mission Board of the Southern Baptist Convention. They made a similar visit there in 1959. Both took time off from their practice—and it will probably stand as their vacation period. **Dr. Miller** feels that such medical missions can win friends for the U.S. in underdeveloped places.

"We are trying to get together a compilation of different agencies which are encouraging medical doctors to take part in similar ventures," he declared. "The American Medical Association has its own plans, such as the ship *Hope*."

"We have had a great deal of response, especially from doctors in Little Rock, who are eager to engage in periods of medical services in underdeveloped areas of the world. We feel there is a definite contribution to be made by Americans in this field—a field easily understood by people of other nations."

Dr. Miller said, "We are doing what we can in a general kind of way to encourage doctors to engage in this kind of work. We feel that we can get Arkansas medical men to realize what they can do."

Old Doctor's Ledger Was Interesting

Earl Moore of Mena brought to the Evening Star an interesting ledger which

showed the receipts of **Dr. Young McKinney**, who practiced medicine in Scott county, the first entry in the ledger being July, 1853.

The charges showed \$2.00 for calls at the residences of patients, in some cases this meaning miles of travel. Most of the medicines prescribed by the doctor were compounded by him and \$2.00 seems to be the general charge for medicine.

In payments, many entries show the doctor received tobacco, sorghum, corn and other farm products. Credit was given for "33½ tubs of corn" for one patient at 50 cents per bushel. Another delivered 15 pounds of bacon and was credited with \$1.20. Still another entry shows "one quart of whiskey, 20 cents." (This doubtless was also a "farm product.") One woman was credited with "one day's washing, 40 cents."

Mr. Moore bought an old house, and then found the ledger. The pages of the ledger are quite yellow, but the first handwriting of the doctor is legible. **Dr. McKinney** was also an ordained Primitive Baptist minister, and his records show marriages he performed, along with births at which he officiated.

Dr. Ben Saltzman Honored at Banquet

Dr. Ben N. Saltzman of Mountain Home received a resounding tribute at a banquet attended by about 150 Rotarians and their wives and guests. The event, held in the dining room of the new Elks Lodge building, honored him for his recent election as an international director of Rotary and his service to the community during the past 15 years.

Dr. Saltzman was presented by the local Rotary with a large, gold-plated plaque containing his etched picture and a record of his election to the international post. The plaque was created by **George E. Fisher** of Little Rock. On receiving the plaque **Dr. Saltzman** said, "It is really the greatest moment of my life."

Dr. Crandall Received Honor at Memphis

Dr. Matthew C. Crandall of Wilmot, Arkansas, who received his Doctor of Medicine degree in 1911, was one of 49 physicians who were honored by the University of Tennessee Medical Units at the Municipal Auditorium in Memphis. The

FEATURES

University recognized the services which Dr. Crandall had rendered to his community during the half-century since his graduation. The physician was presented with a Golden "T" certificate at the commencement exercises. A bus tour of downtown Memphis, with emphasis on the Medical Center, and a luncheon honoring the group preceded the ceremony.

Dr. John Boyce Joins Mock Clinic Staff

Dr. John M. Boyce has joined the staff at Mock Clinic and is at home on North Graham Street, Prairie Grove. Dr. Boyce, a native of Arkansas is a graduate of the Arkansas School of Medicine in Little Rock. He spent one year residency in Shreveport General Charity Hospital and one year as resident physician in the Lafayette Charity Hospital, Lafayette, La. He is a veteran of two years in the Air Force, one year of which was in the Philippines in the Army General Hospital.

Proceedings of Societies

Contributors to the American Medical Education Foundation from the State of Arkansas during June and July 1961:

Dr. Lloyd Barta, Fort Smith	\$ 25.00
Dr. Jean C. Gladden, Harrison	50.00
Dr. Joseph A. Norton, Little Rock	25.00
Dr. Arthur P. Allison, Little Rock	2.00
Dr. George C. Burton, El Dorado	5.00
Dr. Alan G. Cazort, Little Rock	6.25
Dr. Eldon Caffery, Jonesboro	50.00
Dr. Edward M. Cooper, Jonesboro	25.00
Dr. John W. Dodson, Jr., Hot Springs	10.00
Dr. Thomas M. Durham, Jr., Hot Springs	25.00
Dr. Guy R. Farris, Little Rock	25.00
Mrs. Guy R. Farris, Little Rock	10.00
Dr. Alfred H. Hathcock, Batesville	10.00
Dr. Bill Hefley, Little Rock	6.25
Dr. C. L. Hyatt, Monticello	25.00
Dr. Bryant W. Jones, Little Rock	10.00

Dr. Morris A. Jackson, Little Rock	10.00
Dr. Thomas G. Johnston, Little Rock	6.25
Mrs. C. C. Long, Ozark	2.50
Dr. Willie J. Lee, Stamps	10.00
Dr. Porter R. Rodgers, Searcy	25.00
Dr. Purcell Smith, Jr., Little Rock	6.25
Dr. Robert J. Thompson, Fort Smith	10.00
Dr. Ernest L. Wilbur, Little Rock	25.00
Dr. Joseph P. Ward, Little Rock	10.00
	<hr/>
	\$414.50

Doctors Go Fishing

The Craighead-Poinsett Medical Society has resumed activities after disbanding for the Summer Months. To open their activities, they had the following program at the Jonesboro Country Club. "Movies of a Recent Fishing Trip in Canada" by Drs. Joseph Ledbetter, Paul Ledbetter, and Horace C. Barnett all of Jonesboro. A Canadian Trout Fish Dinner was furnished by the Doctors. Needless to say, the meeting was enjoyed by all.

Medical Assistants Hold Meeting

The House of Delegates of the Arkansas State Medical Assistants Society met at the Hotel Lafayette in Little Rock. Delegates and members of the following counties attended: Ashley, Garland-Clark, Jefferson, Miller-Bowie, Ouachita, Sebastian, Union, Washington, Pulaski, and the newest society, Jackson. Delegates-at-large from some of the counties which do not have organized societies were also at the meeting.

The meeting convened at 10:00 a.m.; after the devotional, Dr. Ellery C. Gay discussed "Different Phases of Plastic Surgery." Luncheon was served at noon, after which the House of Delegates was called to order by the president, Mrs. Katherine Spraggins of Little Rock.

Standards of Practice Governing the Relationship Between Lawyers and Physicians

PREAMBLE

Realizing that a substantial part of the

practice of law and medicine is concerned with the problems of persons who are in need of the combined services of a lawyer, physician and hospital; and that the public interest and individual problems in these circumstances are best served by the cooperative efforts of all concerned; we, the members of the Arkansas Bar Association and the Arkansas Medical Society, do adopt and recommend the following declaration of principles as standards of proper conduct for lawyers, physicians and others concerned, subject always to rules of law and standards of legal and medical ethics prescribed for their individual conduct.

A. WITH RESPECT TO REPORTS TO BE FURNISHED.

1. Where a report is requested by the patient's attorney, supported by proper written authorization from the patient, and where the report is to be based on information which the physician can obtain from his own office records, he should furnish a report with or without reasonable charge at the discretion of the parties involved. And similarly, where the requested report would require an additional examination of the patient, or would require that the physician check hospital records, a charge should be made in an amount to be agreed upon between the physician and the patient.

2. Where the report is requested by someone other than the plaintiff, or the plaintiff's attorney, the physician should insist upon proper authorization from the patient before giving the information or the report, and his charge for such report should be in an amount to be agreed upon between him and the person seeking that report.

3. When a report is requested, the lawyer should make clear in his written request for a report the specific condition about which he seeks information, and should likewise indicate whether or not he is asking for a prognosis. The physician, upon receipt of such request, should answer such request and furnish such report promptly.

B. WITH RESPECT TO PHYSICIAN BEING CALLED TO TESTIFY OR TO RENDER A DEPOSITION AS WITNESSES.

1. The relation between a lawyer and

a physician should be based upon mutual courtesy and understanding. A physician should understand that medical testimony is frequently indispensable to prove or disprove the nature and extent of injuries. Therefore, where he undertakes to treat a person who has been injured, he has an incidental responsibility to cooperate with the patient and his attorney if litigation ensues for recovery of damages for the injuries so sustained.

2. It is understood that the fee charged by the physician for his medical services does not take into account any further time or effort on his part in the event of such litigation, and therefore these standards recognize that it is right and proper that the physician should be further compensated for any additional time or effort expended by him in such litigation.

3. A physician should attend court at the time appointed. The lawyer should appreciate, however, that a physician has continuing and often unpredictable responsibilities to his patients. In so far as he is able, the lawyer should make arrangements to permit the physician to testify with a minimum of inconvenience and delay to him.

4. It is recognized that in most instances it is proper that a conference should be held between the physician and lawyer proposing to call him as a witness, at some mutually convenient time before he is to testify.

5. No physician should be subpoenaed as a witness to testify in any case without prior conference with the lawyer calling him, concerning the matters as to which he is to be interrogated, unless both the physician and the lawyer agree that such conference is unnecessary.

6. It is recognized that whether a consultation fee is to be charged to the patient for such conference, and if so, the amount of such fee, should in all cases, depend upon the circumstances pertaining to each case, including the physician's time required in such conference, the extent of his previous services for the patient, and the ability of the patient to pay for such services. Therefore, the amount of the fee, if any, should be a matter of agreement between the physician, lawyer and patient.

7. It is recognized that, although every reasonable effort should be made to minimize the inconvenience to the physician witness, the dispatch of the duties of the courts cannot be governed by the convenience of litigants, lawyers or witnesses, who ever they may be.

8. In so far as it is in their power to do so, however, lawyers should make such advance arrangements for the attendance of physicians as witnesses, as will have due regard for the professional demands upon the physician's time, including preparation of medical evidence. Such advance arrangements contemplate some reasonable notice to the physician of the intention to call him as a witness, prior to the issuance of the subpoena and calling him by phone after the trial has commenced and advising him of the approximate time when he will be called to testify.

9. When a physician is called to testify as a witness for his patient, the charge, if any, to be made to such patient, shall be the equivalent of what the charge would be to such patient for the same amount of time and skill for professional service.

10. When a physician is called to testify as an expert witness, he shall be paid such fee as is agreed upon with the lawyer representing the party calling him.

11. No arrangement shall be made whereby the amount of the physician's charge for his time as a witness shall be determined by the amount of the recovery by the patient in the litigation. Nothing herein is intended to alter the rules of law with reference to attendance of witnesses and fees for their attendance, nor the law with reference to privileged communication.

12. The relationship between lawyer and a physician should be based upon mutual courtesy and understanding; they should conduct themselves towards one another in the courtroom with dignity and respect.

13. Consideration and Disposition of Complaints. The public airing of any complaint or criticism by a member of one profession against the other profession or any of its members is to be deplored. Such complaints or criticism, including complaints of the violation of the principles of this Code, should be referred by

the complaining doctor or lawyer through his own association to the appropriate association of the other profession; and all such complaints or criticism should be promptly and adequately processed by the association receiving them.

14. The physician should testify solely as to the medical facts in the case and should frankly state his medical opinion. The role of the physician witness is to interpret medical facts in lay terms to the judge and jury without regard to what legal conclusions may be drawn from such testimony. He should never be an advocate and should realize that his testimony is intended to enlighten rather than to impress or prejudice the court or jury.

15. Established rules of evidence afford ample opportunity to test the qualifications, competence, or credibility of a medical witness; it is always improper and unnecessary to embarrass or harass a medical witness without just cause.

C. WITH RESPECT TO PHYSICIAN'S FEES AND SERVICES.

1. It is fully understood that under no circumstances should the physician's charges, or his fees as a witness, be contingent upon the success of the patient's litigation.

2. When the physician has not been fully paid by the patient, either for his regular professional services or for his time as a witness, or both, the lawyer shall request permission of the patient to pay the physician for such services, out of any recovery of money which the lawyer may receive on behalf of such patient.

New Members . . .

Dr. E. H. Harper is a new member of the Conway County Medical Society. He is a native of Little Rock, Arkansas, and received his preliminary education at University of Arkansas. His M.D. degree was received from the University of Arkansas School of Medicine in 1960. Dr. Harper has his office at 309 South Morrill Street, Morrilton, Arkansas.

A new member of the Pulaski County Medical Society is **Dr. Dana M. Street**.

He is a native of New York, New York, and received his preliminary education at Haverford College at Haverford, Pennsylvania, from which he received a B.S. degree. His M.D. degree was received from Cornell Medical College at New York. Dr. Street is now Professor of Orthopedic Surgery at the University of Arkansas Medical Center.

Dr. James C. Melby is a new member of the Pulaski County Medical Society. Dr. Melby received his preliminary education at the University of Minnesota at Minneapolis, Minnesota from which he received a B.S. degree. His M.D. degree was obtained from the University of Minnesota in 1953. He is Associate Professor of Medicine at the University of Arkansas Medical Center.

Dr. Robert S. Abernathy of Little Rock is a new member of the Pulaski County Medical Society. A native of Gastonia, North Carolina, Dr. Abernathy received his preliminary education at Davidson College, Davidson, North Carolina and Yale University. He received his M.D. degree from Duke University at Durham, North Carolina in 1949. Dr. Abernathy's specialty is Internal Medicine and he is Associate Professor of Medicine at the University of Arkansas Medical Center.

Dr. Stephen B. Finch is a new member of the Pulaski County Medical Society. Dr. Finch received his preliminary education at Hendrix College located at Conway, Arkansas from which he received a B.A. degree. His M.D. degree was obtained from the University of Arkansas in 1958. Dr. Finch's specialty is Psychiatry and he is a Resident in Psychiatry at the University of Arkansas Medical Center.

A new member of the Dallas County Medical Society is **Dr. Hugh Scott McMahan**. He is a native of Emerson, Arkansas, and received his preliminary education at Hendrix College located at Conway, Arkansas, from which he received a B.A. degree. His M.D. degree was received from the University of Arkansas Medical School in 1960. Dr. Mc-

Mahan has his office at 209 Spring, Fordyce, Arkansas.

Dr. Don Gene Howard of Fordyce is a new member of the Dallas County Medical Society. A native of England, Arkansas, Dr. Howard received his preliminary education at the University of Arkansas. He received his M.D. degree from the University of Arkansas School of Medicine in 1960. Dr. Howard's office is located at 209 Spring in Fordyce, Arkansas.

Woman's Auxiliary

Southeast Medical Auxiliary Tours Homes

Members of the Southeast Arkansas Medical Auxiliary toured the homes of Mrs. Ralph Rash, Mrs. S. A. Banks, Mrs. Guy Robinson, Mrs. W. R. Meador and Mrs. Bob Stimson in Dumas. The members who visited were: Mrs. Rom Honeycutt of Little Rock, Mrs. Guy Robinson of Dumas, Mrs. Fred Allison of Jackson, Miss., Mrs. J. B. Holder of Monticello, Mrs. Ross Maynard of Pine Bluff, Mrs. Bryan Perry of Pine Bluff and Mrs. Major Smith of Dermott.

Book Reviews

PATHOLOGY, Fourth Edition by W. A. D. Anderson, Editor, M.A., M.D., F.A.C.P., F.C.A.P., Professor of Pathology and Chairman of the Department of Pathology, University of Miami School of Medicine, Director of the Pathology Laboratories, Jackson Memorial Hospital, Miami, Florida, pp. 1389, illustrated, published by The C. V. Mosby Company, St. Louis, 1961.

Dr. Anderson's text is virtually encyclopedic. Different authors write on different topics. Most of these authors are almost invariably outstanding authors in their field. The book is well organized and is up to date. This is the fourth edition. Of particular interest are the numerous excellent illustrations. This book has numerous references at the end of each chapter. There is an excellent section on diseases of the nervous system. Trauma is adequately covered in this as well as distinct diseases. This book is highly recommended to practitioners and students.

EDEMA MECHANISMS AND MANAGEMENT, A Hahnemann Symposium on Salt and Water

Retention, Edited by John H. Moyer, M.D., Professor and Chairman of the Department of Medicine, Hahnemann Medical College and Hospital, and Morton Fuchs, M.D., Assistant Professor of Medicine, Hahnemann Medical College and Hospital, pp. 833, illustrated, published by W. B. Saunders Company, Philadelphia and London, 1960.

This excellent book on edema is written by a number of authorities in the field of metabolism and renal disease. It is authoritative and up-to-date. It answers many questions not ordinarily discussed in textbooks. This book is heartily recommended to internists and general surgeons. It also is of interest to research workers in the general field of renal disease and metabolism. It is heartily recommended.

ONCOGENIC VIRUSES, by Ludwik Gross, M.D., Chief, Cancer Research Unit, Veterans Administration Hospital, Bronx, New York, pp. 393, illustrated, Vol. II, published by Pergamon Press, New York, Oxford, London, Paris, 1961.

This is an intensely interesting book. It discusses tumor-causing viruses from both an experimental point of view and on the basis of some human work. Among the things discussed are Papillomatosis of rabbits, Rous chicken sarcoma, mouse leukemia, Parotid tumor virus etc. The best summary of the relationship of this experimental work to the human science of medicine is best expressed in the author's own words:

"The viral origin of many, perhaps even most, of the malignant tumors, including leukemias, has been established experimentally in chickens, in mice, and more recently, although less completely, also in rats. It was already pointed out elsewhere in this monograph that it would be rather difficult to assume a fundamentally different etiology for human tumors. The various sarcomas, carcinomas, leukemias, and related neoplasms in man are so similar in their morphology and clinical course to those observed in lower species of animals, that it would appear only logical to assume that they represent the same disease.

"The assumption that human tumors are of viral origin is also consistent with several direct observations on humans, such as (a) the numerous, some of them striking, cases of familial incidence of tumors and leukemia; (b) the induction of tumors and leukemia with ionizing radiation; (c) the clinical course of leukemia and allied diseases with the periods of fever and exacerbations, alternating with remissions, etc.

"It is necessary, nevertheless, to separate established experimental data from theories, no matter how logical and suggestive the latter may appear. It is realized, therefore, that the concept of viral etiology of malignant tumors, including leukemias, in humans, has not yet been supported by experimental evidence. For that reason it remains a 'working hypothesis' at the present time."

This book is heartily recommended to medical students and to all practicing physicians. Many of the developments reported in here are of only experimental interest and yet any physician will find this interesting, challenging reading. AK

TUBERCULOSIS ABSTRACTS

Sponsored by
The Arkansas Tuberculosis Association

AMBULATORY TREATMENT OF TUBERCULOSIS

A group of tuberculosis patients at an Army hospital were graduated from ambulation to calisthenics to active sports without harmful results. The program was conceived to condition the patients for return to military duty.

JAMES A. WIER, M.D., JAMES M. SCHLESS, M.D., LUKE E. O'CONNOR, M.D., AND ORMAN L. WEISER, M.D., *The American Review of Respiratory Diseases*, July, 1961.

On the basis of experience in this hospital and that of others, physical activity per se appears not to be harmful to the tuberculous process in the presence of chemotherapy.

Since an abrupt change in physical activity might occur when a patient was transferred from a status of convalescent leave to one of full military duty, it appeared appropriate to test the effect of this added physical stress in the hospital environment.

Therefore, a previous program of free ambulation was expanded to include a certain amount of controlled physical exercise, in the form of calisthenics. This was gradually increased to include competitive sports and full-time on-the-job work assignments.

PURPOSES OF STUDY

There were several purposes for undertaking this study: (1) to determine if a program of active physical exercise would be harmful in patients receiving adequate multiple-drug therapy; (2) to see if it would be feasible to shorten periods of convalescent leave and time off duty by physical reconditioning during hospitalization; and (3) to see if the use of this program would further strengthen in the patient's mind the philosophy of discouraging disability attitudes, particularly in the career soldier, and encouraging the patient to think and plan constructively for the future. It is hoped that educational programs and on-the-job training can be developed to the point that the patient, from a career standpoint, would be better off for having had this period of hospitalization. If no

physical harm is done, there is no question that the psychologic and morale-building advantages would be many.

All of the patients (105) had previously untreated pulmonary parenchymal disease. Daily isoniazid and PAS were given to all but those unable to tolerate PAS; as a substitute, these patients received streptomycin. The last drug was also given as an additional drug to some patients with extensive disease.

On admission to the hospital, following initial examinations and institution of chemotherapy, the patients were started on regular occupational therapy and educational programs. Asymptomatic patients were expected to participate in active calisthenics for 15 minutes per day on a five-day week basis, beginning within two to four weeks of admission; however, calisthenics were not started in some patients with far advanced disease and large cavities until two months after admission. The calisthenics were approximately on the level of activity given to regular troops during their basic training period. Rest periods were eliminated for these patients.

When the patients reached the noncommunicable stage, without regard to roentgenographic change, active sports were added, including basketball, volleyball, golf, bowling, and swimming. Cavities had usually been resected by this time. A minimum of one hour of active sports a day, five days a week, was required. However, most patients engaged in two hours of sports. When noncommunicable status was reached, on-the-job training was added to the program. The patient was later given a job on the post and was gainfully employed on a full eight-hour-a-day schedule for several months prior to discharge.

In 62 per cent of the patients, the disease was either moderately or far advanced; 44 per cent had cavitory disease at the time of original diagnosis; 81 per cent had tubercle bacilli in the sputum at the time of original diagnosis.

TREATMENT RESULTS

The results of treatment, as judged by roentgenographic changes, showed that 82 of the patients had either marked or moderate roentgenographic improvement; 19 had slight improvement, and four had no significant roentgenographic change. No patient showed evidence of worsening.

Of the 46 patients with cavitory disease, 20 achieved complete healing within three to eight months on chemotherapy alone. In 24 additional cases, resectional surgery for residual cavities was performed after five to eleven months of treatment. Two patients were eventually discharged with the "open-negative" syndrome. No patients with cavities were discharged if their sputum was infectious, and in no instance was there evidence of enlargement of existing cavities or development of new cavitation during the period of observation.

Of the 105 patients, 33 were subjected to thoractomy—24 for resection of residual cavitation, five for resection of extensive residual nodular disease; in four cases, surgery was for diagnostic purposes.

INFECTIOUSNESS REVERSED

Reversal of infectiousness occurred rapidly. Seventy-one of the 81 patients with tubercle bacilli in the sputum pretreatment were non-infectious by the end of the second month. Only three patients were still discharging tubercle bacilli at the end of the fourth month. One became noninfectious at the end of six months and remained so thereafter. Two patients with noninfectious sputum at the end of two months had a single culture positive for tubercle bacilli at four months, and remained negative thereafter. Both of these patients eventually came to surgery, one at six and one at ten months. A single patient continued to discharge tubercle bacilli at the end of six months. His strain of tubercle bacilli was 100 per cent resistant to isoniazid at that time. At the end of seven months resectional surgery was performed.

The average duration of hospitalization was approximately 12 months. The patients were discharged at the end of this period and advised to take additional chemotherapy for another six months, for an average of 18 months of total therapy. One hundred of the 105 patients were discharged as fit for military duty. Five were placed on temporary retirement, two for administrative reasons. Two of these patients, although unfit for military duty, were capable of living in the general community under reasonably normal conditions as their limitations were imposed by pulmonary insufficiency rather than pulmonary tuberculosis. Thus, in none of the patients was



LOMOTIL[®]

(brand of diphenoxylate hydrochloride with atropine sulfate)

- * lowers motility
- * **controls diarrhea**

Lomotil brings prompt symptomatic control in diarrhea, either acute or chronic.

Both pharmacologic and clinical evidence indicate that *Lomotil* selectively lowers the propulsive component of gastrointestinal motility without relaxing intestinal sphincters. So efficient is this action that studies in mice have shown *Lomotil* to be effectively antidiarrheal in one-eleventh the dosage of morphine.

Such striking antidiarrheal activity strongly suggests that *Lomotil* is the drug of *first* choice for prompt and positive control of diarrhea.

Dosage: The recommended initial dosage for adults is two tablets (2.5 mg. each) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is under control. Maintenance dosage may be as low as two tablets daily. *Lomotil* is supplied as unscored, uncoated white tablets of 2.5 mg., each containing 0.025 mg. of atropine sulfate to discourage deliberate overdose. Recommended dosage schedules should not be exceeded.

An exempt preparation under Federal Narcotic Law.

Descriptive literature and directions for use available in Physicians' Product Brochure No. 81 from G. D. Searle & Co., P.O. Box 5110, Chicago 80, Illinois.

G. D. SEARLE & CO.

CHICAGO 80, ILLINOIS

Research in the Service of Medicine

FEATURES

the tuberculous disease considered a disabling factor at the time of discharge.

The only harmful effects noted in the

entire group were due to accidents during competitive sports — two received fractures.

ANSWER TO WHAT'S YOUR DIAGNOSIS?

62 year old white male

Exertional dyspnea for one year. Cough for four to six months productive of thin white sputum. Marked anorexia and weakness.

DIAGNOSIS: Bronchogenic carcinoma with lymphatic spread.

X-RAY FEATURES: There is cardiac enlargement in the region of the left ventricle. There is a poorly defined mass in

the region of the right hilum and possible lymph node enlargement in the left hilum. There is patchy and streaky density throughout, particularly the lower portion of the right lung with small beaded nodulations approximately along the distribution of pulmonary lymphatics. There is associated obliteration of the right cardiophrenic angle by fluid. Differential diagnoses would include sarcoidosis, fungous infection, and congestive heart failure with pulmonary edema.

December, 1961

THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Vol. 58 No. 7

FORT SMITH

U.C. MEDICAL CENTER LIBRARY

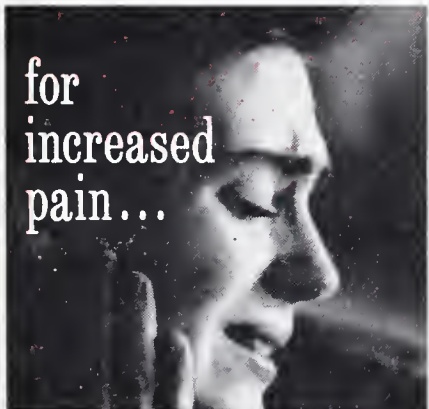
DEC 27 1961

San Francisco, 22

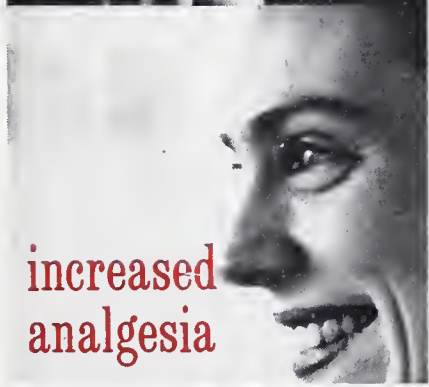
86th ANNUAL
ARKANSAS MEDICAL SOCIETY

HOT SPRINGS

APRIL 29—MAY 2, 1962



for
increased
pain...



increased
analgesia



DARVON® COMPOUND-65

Darvon Compound-65 provides twice as much Darvon® as does regular Darvon Compound without increase in salicylate content or the size of the Pulvule®. Usual dosage is 1 Pulvule three or four times daily.

Darvon Compound	Darvon Compound-65
32 mg.	Darvon 65 mg.
162 mg.	Acetophenetidin 162 mg.
227 mg.	A.S.A.® 227 mg.
32.4 mg.	Caffeine 32.4 mg.

Darvon® Compound (dextro propoxyphene and acetylsalicylic acid compound, Lilly)
Darvon® (dextro propoxyphene hydrochloride, Lilly)
A.S.A.® (acetylsalicylic acid, Lilly)

Product brochure available; write Eli Lilly and Company, Indianapolis 6, Indiana.

120360

when urinary
tract
infections
present
a therapeutic
challenge...

CHLOROMYCETIN[®]

(chloramphenicol, Parke-Davis)

Often recurrent... often resistant to treatment, urinary tract infections are among the most frequent and troublesome types of infections seen in clinical practice.^{1,2} In such infections, successful therapy is usually dependent on identification and susceptibility testing of invading organisms, administration of appropriate antibacterial agents, and correction of obstruction or other underlying pathology.

Of these agents, one author reports: "Chloramphenicol still has the widest and most effective activity range against infections of the urinary tract. It is particularly useful against the coliform group, certain *Proteus* species, the micrococci and the enterococci."¹ CHLOROMYCETIN is of particular value in the management of urinary tract infections caused by *Escherichia coli* and *Aerobacter aerogenes*.³ In addition to these clinical findings, the wide antibacterial range of CHLOROMYCETIN continues to be confirmed by recent *in vitro* studies.⁴⁻⁶

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals[®] of 250 mg., in bottles of 16 and 100. See package insert for details of administration and dosage.

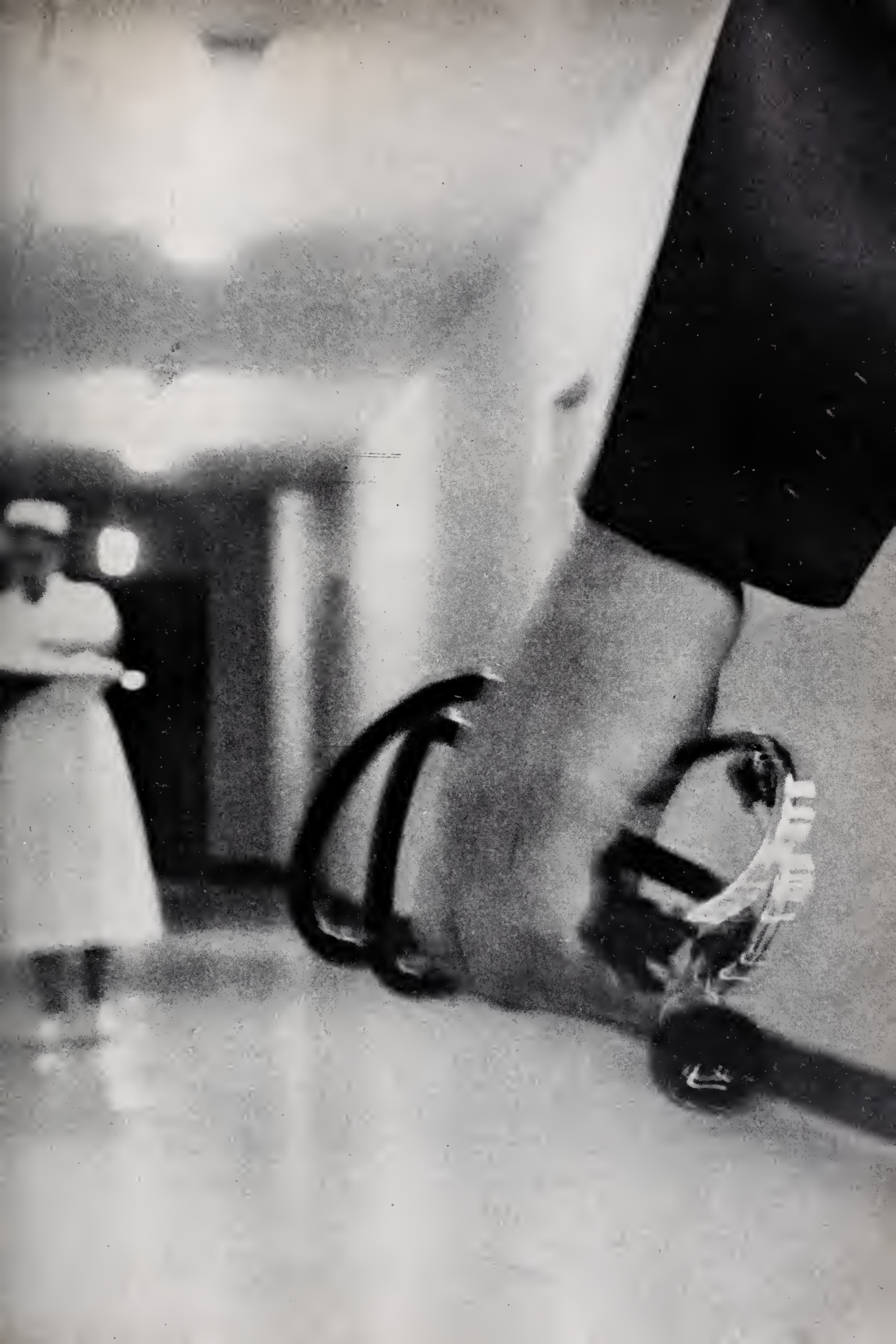
Warning: Serious and even fatal blood dyscrasias (aplastic anemia, hypoplastic anemia, thrombocytopenia, granulocytopenia) are known to occur after the administration of chloramphenicol. Blood dyscrasias have occurred after both short-term and prolonged therapy with this drug. Bearing in mind the possibility that such reactions may occur, chloramphenicol should be used only for serious infections caused by organisms which are susceptible to its antibacterial effects. Chloramphenicol should not be used when other less potentially dangerous agents will be effective, or in the treatment of trivial infections, such as colds, influenza, or viral infections of the throat, or as a prophylactic agent. **Precautions:** It is essential that adequate blood studies be made during treatment with the drug. While blood studies may detect early peripheral blood changes, such as leukopenia or granulocytopenia, before they become irreversible, such studies cannot be relied upon to detect bone marrow depression prior to development of aplastic anemia.

References: (1) Malone, F. J., Jr.: *Mil. Med.* 125:836, 1960. (2) Martin, W. J.; Nichols, D. R., & Cook, E. N.: *Proc. Staff Meet. Mayo Clin.* 34:187, 1959. (3) Ullman, A.: *Delaware M. J.* 32:97, 1960. (4) Petersdorf, R. G.; Hook, E. W.; Curtin, J. A., & Grossberg, S. E.: *Bull. Johns Hopkins Hosp.* 108:48, 1961. (5) Jolliff, C. R.; Engelhard, W. E.; Ohlsen, J. R.; Heidrick, P. J., & Cain, J. A.: *Antibiotics & Chemother.* 10: 694, 1960. (6) Lind, H. E.: *Am. J. Proctol.* 11:392, 1960.

PARKE-DAVIS

68961

PARKE, DAVIS & COMPANY, Detroit 32, Michigan



THE Journal OF THE Arkansas Medical Society

Owned by
THE ARKANSAS MEDICAL SOCIETY
And Published Under Direction of the Council

ALFRED KAHN, JR., M.D., Editor
1300 West Sixth Street Little Rock, Arkansas
MR. PAUL C. SCHAEFER, Business Manager
218 Kelley Bldg. Fort Smith, Arkansas
LITTLE ROCK BUSINESS OFFICE
114 E. Second St. Little Rock, Arkansas

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY
WM. A. SNODGRASS, JR.—President Little Rock
H. KING WADE, JR., President-Elect Hot Springs
M. E. BLANTON, First Vice-President Jonesboro
CHARLES W. REID, Second Vice-President Pine Bluff
L. E. DREWREY, Third Vice-President Camden
H. ELVIN SHUFFIELD, Secretary Little Rock
W. R. BROOKSHER, Secretary Emeritus Fort Smith
BEN N. SALTZMAN, Treasurer Mountain Home
C. LEWIS HYATT, Speaker, House of Delegates, Monticello
J. P. PRICE, JR., Vice Speaker,
House of Delegates Monticello
MR. PAUL C. SCHAEFER, Executive Secretary,
P. O. Box 1345 Fort Smith

COUNCILORS
First District JOE VERSER Harrisburg
ELDON FAIRLEY Osceola
Second District HUGH R. EDWARDS Searcy
PAUL GRAY Batesville
Third District K. E. BEATON Wynne
FRED B. STONE Stuttgart
Fourth District H. W. THOMAS Dermott
T. E. TOWNSEND Pine Bluff
Fifth District J. L. DEDMAN Camden
GEORGE C. BURTON El Dorado
Sixth District JOHN P. WOOD Mena
KARLTON H. KEMP Texarkana
Seventh District MARTIN EISELE Hot Springs
J. W. KENNEDY Arkadelphia
Eighth District ROBERT D. JONES Little Rock
BILL DAVE STEWART Little Rock
Ninth District ROSS FOWLER Harrison
STANLEY APPLGATE Springdale
Tenth District L. A. WHITTAKER Fort Smith
C. C. LONG Ozark

The Advertising policy of this JOURNAL is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

EXCLUSIVE PUBLICATION — Articles are accepted for publication on the condition that they are contributed solely to this JOURNAL.

COPYRIGHT 1961—By The JOURNAL of the Arkansas Medical Society.

NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to the membership.

● SCIENTIFIC ARTICLES

Reactive States
Following Strokes 265
Montague Ullman, M.D.

Diseases of the Vulva- Benign
and Malignant 271
Stewart A. Fish, M.D.

The Genealogy of the
Medical Center 276
Willis E. Brown, M.D.

● WHAT'S NEW

Cushing's Syndrome in an
Adolescent Girl 285
David H. James, Jr., M.D.

● TEACHING SEMINAR

Constitutional Non-
Hemolytic Forms
of Jaundice 290
Kerrison Juniper, Jr., M.D.

● FEATURES

What Is Your Diagnosis? ... 296

Public Health at a Glance... 297

Editorial:
Is Hemochromatosis a
Variant of Cirrhosis? 299
Alfred Kahn, Jr., M.D.

Medicine In The News 301

Obituary 310

Personals and News Items 310

Proceedings of Societies 311

New Members 312

Woman's Auxiliary 313

Book Reviews 314

Tuberculosis Abstracts 314

Letters 316

Notice on Form 3579-P to be sent to Arkansas Medical Society, 218 Kelley Building, Fort Smith, Arkansas. Published monthly under direction of the Council, Arkansas Medical Society, Vol. 58, No. 7. Subscriptions \$3.00 a year. Single copies 50 cents. Entered as a second class matter, May 1, 1955, at the post office at Little Rock, Arkansas, under the Act of Congress of March, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 1, 1918. Second-class postage paid at Little Rock, Arkansas.

The JOURNAL

OF THE ARKANSAS MEDICAL SOCIETY

PUBLISHED MONTHLY UNDER DIRECTION OF THE COUNCIL

Volume 58

DECEMBER, 1961

Number 7

Reactive States Following Strokes*

MONTAGUE ULLMAN, M.D.**

Presented Before The Thirteenth Annual Institute In Psychiatry And Neurology At The Veterans Administration Consolidated Hospital — Little Rock, Arkansas, March 2, 1961.

Based in part on a talk delivered before—Transactions Of The Third Princeton Conference, January 4-5-6, 1961.

I would like to present some observations made over the past three years in the Stroke Study at Bellevue Hospital. I am going to limit my remarks for the most part to the problems of patients with residual motor deficit but with no enduring diffuse cerebral dysfunction. These observations were made on 94 patients who fulfilled these criteria and where verbal exchange was possible.

First a word about the clinical population. The age range extended from the 4th to the 9th decade with the heaviest weighting in the 6th and 7th decades. With few exceptions they are people who have lived most of their lives at a lower socio-economic level. Many were immigrants to this country. Not very many had either completed or gone further than a grade school education. Among the men, close to half had either married or had unsuccessful marriages. Work histories were often sporadic. Except for an occasional artisan or professional most of their productive years had been spent at unskilled labor. A higher proportion of the women had been married. The fabric of their lives was generally a more consistent and stable one than in the case of the men.

Before considering the post-stroke situation and the adaptive processes involved, let me sum up the modulating influences of the aging process itself in an effort to assess the resources of these patients as

they encounter this type of stressful situation. Briefly, this may be distilled down to a few prevailing trends. We are dealing with a population where, by and large, the sources that trigger off neurotic conflicts earlier in life, such as sexual needs, family adaptations, competitive social pressures, or simply the ordinary obstacles in the lonely and sometimes tortuous path toward self-realization, have receded into the background. This is not to imply that personality limitations do not continue to operate, but they do so now in a life situation which is qualitatively different than in earlier stages. The transactions have become stabilized, however severe the distortions that may enter the picture. They have become limited. They have become more related to basic necessities. These patients are more involved in a present and a past orientation than in a future orientation. A correlary to this pertains to the importance of the supportive aspects of the environment. Along with the aging process there is a subtle transfer of the center of gravity of security operations to stable, predictable environmental responses, regardless of whether this occurs in relation to inanimate objects within the four walls of a hotel room, or in a more complex family milieu.

Our initial concern was to obtain as complete a statement as possible about the occurrence of the stroke as it was subjectively experienced by the patient. This proved to be of interest for several reasons. The reactions expressed were very

*This study is part of a long-term investigation of Cerebral Vascular Disease—Supported by The National Institute for Neurological Diseases and Blindness. United States Public Health Service Grant No. 3-B-9009.

**108 East 81st Street, New York, N. Y.

revealing of the range of the resources as well as the personality limitations of the patients. Courage, self-control, patience and acceptance were perhaps the rule rather than the exception. Idiosyncratic attitudes towards illness, handicap, helplessness or death were directly or indirectly revealed.

The following accounts typify the common tendency to rationalize the initial symptoms:

"I got up to go to the bathroom. I laid down again. In the morning I could not move. I see the hand don't move. I rub myself. In the coffee house a fellow sees me and sends me to the hospital. I was paralyzed, but it was so little I thought it was because of an old burn 10 or 11 years ago."

"I woke in the morning. I tried to get out of bed. All of a sudden I was half paralyzed. I managed to walk downstairs. I wanted to cross the street and get something to eat. I could not think of anything. I thought maybe it was a cold settling on my spine. When I talked to people they looked at me in astonishment. There was something wrong with my speech."

Stoicism as a defence is illustrated in the reaction of the next patient:

"I noticed my hand did not move . . . I noticed a little trouble with my foot. I noticed my tongue wasn't working right . . . I was strong like an ox—all of a sudden I fell down on the floor. I could not move . . . I wasn't frightened—I wouldn't know what it is to be frightened. I figured it this way, if I get well I'll know what happened to me. Otherwise I wouldn't know."

The early outlines of what later developed as depressive, paranoid or denial operations could often be discerned in these initial responses. Later reactions were forecast by tendencies to either maximize or minimize the effect of a new life situation and one characterized by rapid changes in its physical, psychological and social dimensions. Efforts at preserving the sense of personal inviolability were manifest either through staunch and stoical attitudes or through evasions, rationalization and implicit denial. At the other extreme and less often, patients displayed mounting apprehensiveness and

heightened dependency. In the former instance initial attitudes toward hospitalization and dealings with nursing and medical personnel were negatively tinged; in the latter there was a receptivity toward the medical support available and the ensuing transactions with medical personnel carried a positive tone. There were other interesting aspects of the subjective reactions that pertain to the unique descriptions patients gave of similar sensory and motor deficits.

The following are the initial reactions of a 56-year-old male immediately following the occurrence of a right hemiparesis. The diagnosis was thrombosis of the left middle cerebral artery. He was at work as an elevator operator when his leg began to give way. He managed to get to a chair and then noted the following:

"My eyeglasses seemed alive in my right hand. I could look at it in a stupid sort of way but had no control over it. It seemed as if the glasses had become an animal or a crab. The only time I really got frightened was when I couldn't control my right hand, then the glasses appeared animated.

COMMENT

This transitory illusion involving the eyeglasses is of a type that is occasionally associated with the sudden loss of motor power and the simultaneous occurrence of sensory changes in a limb. The movement of an inanimate object inadvertently by the involved limb appears to originate from the object itself as its relation to the limb and the connection of the latter to the self is not immediately perceived.

Another patient gave the following interesting account of the onset of a hemianopia:

"While I was walking to the hospital a hole came into my right eye. Everything seemed to be coming into it. Things went into the hole and then stopped. I don't notice it now but it was like a round hole in the right side. Things disappeared into that hole. Now wasn't that strange? You'd think I'm crazy!"

The evaluation of the patient's behavior at this initial stage has to take into regard the fact that the patient is confronted with a situation that has the following characteristics:

- 1) It is new and relatively unfamiliar
- 2) It is rapidly changing

- 3) The full import and meaning cannot be readily grasped in the initial stages.

What we observe through the medium of the initial subjective account is essentially the impact of a suddenly arising stressful event perceived with greater or lesser clarity as potentially catastrophic upon the momentum of the premorbid personality and life style. The three possible directions the patient can move in are toward realistic integration, resignation or denial. Which he chooses, whether to struggle realistically and attempt to come to terms with his new life situation in a way that ultimately enhances his stature as a person or struggles unrealistically through techniques of hopelessness or denial is at this stage a function of his habitual mode of responding to stress. The new elements in the situation are too overwhelmingly new to be fully absorbed and hence do not yet elicit any qualitatively new adaptive responses.

REACTIVE STATES

I would like to move on now toward a later stage, perhaps three or four weeks after hospitalization, when the situation is more known and appreciated by the patient. It is at this time that any one of a number of reactive states may be noted. I wish, however, to focus on only one such state, namely, that of depression as it constitutes by far the most frequently occurring manifestation.

Occasionally a reactive depression occurs which in its format is similar to reactive depressions occurring in other contexts. There is a manifest provocation in the life situation. The patient responds not only to this, but also to the symbolic connections of the current situation to an earlier and unresolved conflictual situation. The result is an over-reaction in the present along the lines of guilt, self-reproach and feelings of futility.

CASE 1

The patient, a 65-year-old white female, was admitted to the hospital following the sudden onset of a right hemiparesis. The latter cleared within two weeks following admission. The discharge diagnosis was thrombosis of a branch of the left middle cerebral artery.

In the initial interview the patient was somewhat reticent about divulging infor-

mation concerning her past. She was a well groomed, pleasant and articulate woman who appears younger than her stated age. For the past 15 years she had worked as a supervisor in the mail department of a large New York hotel. She is the second of four siblings. A younger sister had died of a heart attack 12 years before. The patient was married in 1914 but separated three years later. Her husband died six years ago. They did not get a divorce nor did he continue to support her. She denies having anything to do with any other men following the separation. She had a hysterectomy in 1940.

When seen again two weeks following the onset of her illness a depressive affect was noted despite the rapid recovery she had made. She was encouraged to talk about herself. After some persistence on the part of the examiner she suddenly began to cry and revealed the fact that at one time she had had a 4+ Wassermann and that this was preying on her mind. This was first discovered in 1922. She had contacted syphilis from her husband. She felt certain that in some way it was connected with her present illness, this despite the fact that her serology had been negative for many years. She would not give any other details about her marriage other than to indicate that she and her husband had been unhappy together. She made repeated references to the Wassermann test indicating this had been a blight upon her existence and that the stroke had occurred as a kind of punishment. Subsequent interviews were characterized by tearfulness, expressions of guilt, self-derogation and references to herself as a "typhoid Mary."

COMMENT

The stroke, in upsetting the smooth routine of a circumscribed but satisfying way of life had shaken her defenses and opened up old wounds. The adaptation through guilt and fear of punishment, painful as it was, enabled her to temporarily by-pass the full implications and reality of her present illness. The depressive affect did not lift until she was once again able to resume her former work regime.

More characteristic among the stroke patients, however, particularly those with moderate to severe residual motor deficit is the slow and gradual evolution of a

depressive affect, sometimes sub-clinical in intensity and not infrequently unrecognized initially by the patient himself. The situation is akin to a prolonged state of mourning made interminable by the fact that what has been lost can never be restored. It is the inexorability and finality rather than the intensity which is the outstanding feature of this response. In contrast to the patient with a reactive depression who, despite his avowed feeling of hopelessness is actually reaching out into his environment for help at an interpersonal level, these patients do not appear to send out distress signals or actively seek help. There is no denial of the depression. There is simply acceptance of it. It is an accurate reflection registering at some level of conscious awareness the failure and limitations of one's resources in coping with the developing train of events.

CASE 2

Patient is an 83-year old white male who experienced a transitory left hemiparesis. Diagnosis: Thrombosis, right middle cerebral artery.

When first seen, the patient was alert, responsive, eager for contact and looked and acted younger than his age. He was born in Hungary and came to this country alone at the age of 16. The quality of his existence is best expressed in his own words:

"I came here alone at the age of 16 and I went to school to learn English. They started me off in a cigar-making factory. I didn't work there long, maybe three or four years, and then I said to myself, 'This isn't the life'. They paid me poorly. There was no future and my family didn't help me out. They were poor and ignorant. I was very good at that work. A big concern gave me a job. They taught me how to be a foreman. I worked there over ten years. The girls looked up to me. I was a nice-looking fellow and young. I liked to keep company with girls but not to get married. I didn't make enough money. My ambition was to settle down on a solid foundation. So I didn't really live. I didn't want to get married like an ignorant fool. When I needed a woman I paid her and then good-bye."

He spoke of his retirement ten years earlier with regret. "I don't like it. I

can't bring back the young years. I look for a job and they laugh at me because of my age."

He described his reaction to his illness: "I didn't think I was going to get sick like this. I can't walk. I can't use my arm. I'd like to go home, go to sleep and never wake up. I don't mean I would ever kill myself. I've just overleased my time."

The hemiparesis cleared in the course of the next two months except for some residual weakness in the left upper extremity. Despite this, there was a general deterioration in his physical condition. He presented multiple somatic complaints, some of which, on investigation, proved referable to osteo-arthritis of the cervical spine and poor circulation in both lower extremities. He ate and slept poorly. He was transferred to the rehabilitation service but felt too weak to participate in any organized program of activity. He became increasingly depressed and voiced his dissatisfaction with himself, his surroundings and the ward personnel. He began to lose hope of ever leaving the hospital when a brother upon whom he was counting to arrange for his care left the city. He refused to consider a nursing home or any other placement. He gradually became completely bedridden and died seven months after his admission to the hospital. Autopsy revealed severe generalized arteriosclerotic changes.

COMMENT:

At the time the stroke occurred the patient's existence was in a state of precarious balance both physically and emotionally. From the physical point of view, the causative factors accounting for his death existed for many years before the stroke, to the point where the degree of reserve in his vital organs was almost depleted. From the psychological point of view, his relatedness to his surroundings had grown very tenuous and his sense of usefulness to himself and to others had been considerably undermined since his retirement. The stroke was, in effect, an incidental occurrence which simply served to expose and accentuate the underlying deteriorating processes at work. At some point there was an intuitive realization by the patient that this was the case. The struggle to live was renounced and the depression came into the picture as an ef-

fort by the patient to cooperate in the process of dying.

In patients who get well enough to leave the hospital the depression appears to exist in parallel with the general capacity for day to day living. What the patient does or does not do may influence but does not eliminate the depressive core.

The significant point about this type of adaptive failure is that it derives from difficulties that are not primarily psychological in nature but relate essentially to the real inability to reverse or compensate for the drastic physical and social changes ensuing in the wake of the stroke. Effective therapeutic intervention may limit but not eliminate this type of depressive reaction.

What can we say generally about the factors influencing the patients' response at this time in the disease process? The nature of the disease and the toll it has exacted have now come into focus. But so have certain new elements. These include:

- 1) The actual process of recovery
- 2) The witnessing of recovery by other patients.
- 3) The attitudes of medical personnel.
- 4) The effectiveness of the medical regime.

It is in response to these factors that new modes of adaption may or may not come into the picture depending on the openness, the flexibility and the latent potential of the patient, all of which are most in evidence in this initial four week period. There exists no rule of thumb for predicting the outcome. Perhaps the surest guide is the patient's capacity for meaningful and enduring relatedness to an idea, an activity or a person as revealed in his past history. At any rate this is the stage during which whatever personality reorganization is apt to take place does take place and hence it is the stage of greatest receptivity to outside intervention. A test situation exists in which the environment may or may not succeed in meeting the patient's need for support, stability and consensual validation concerning progress and the possibility of a hopeful outcome.

POST-HOSPITALIZATION PHASE:

As a final point I wish to call attention to a few pertinent observations noted

during the follow-up period:

By and large, the patients who have no enduring diffuse cerebral dysfunction and who have been transferred to the Rehabilitation Service have reacted appropriately to the program as a reasonable and necessary learning experience. They are able to make the connection between the laborious techniques of muscle retraining and the projected needs of their own future existence. Once this connection is made an array of problem-solving resources comes into play. Without it considerable potential may lie fallow. What I have to say now applies to the patient who cannot make the connection either because of some measure of mental impairment or as a result of motivational deficiencies associated with personality limitations and/or a poor life situation.

The future course of this type of patient is determined by the elements in the life situation to which he is returning rather than by the degree of mobilization of any new adaptive facilities resulting from the hospitalization experience. He has moved from a situation in which, to him, the emphasis has been on physical rehabilitation out to an environmental situation the most important aspect of which are the new and unexpected social demands that lie in wait. From the patient's point of view it is as if he has been subjected to a strenuous program of physical re-education and retraining without any clear concept of, or felt response to the link between such retraining and the actual remaining sources of gratification open to him socially. Perhaps, in regard to this type of patient we have brought into the rehabilitation process a stereotyped concept of doctor-patient relatedness where each aspect of the patient's disorder is noted, evaluated and prescribed for, whether the deficit be in the physical or psychological sphere. This, however, tends to blur a qualitative distinction between meeting the needs of a patient in combatting a disease process and meeting the needs of a patient in combatting an adverse life situation. In the former instance the patient is apt to respond to the activities of the physician regardless of how the situation is interpreted by the patient. In the latter the situation as viewed by the patient pow-

erfully influences the ministrations of the physician. The important corollary to this is that the success or failure of physical rehabilitation is contingent upon the degree of involvement of the patient in the task at hand, that is the meaning of the task to the patient and this in turn is related to the immediate and concrete application the patient can make to an immediate and continuing source of gratifying activity. This shifts the emphasis to the primary task of social involvement at whatever level this is possible with physical rehabilitation facilitating movement in this direction. The needs of these patients are similar to the needs of people generally—to be active, to feel competent and to engage in meaningful transactions with other people. I wonder to what extent the rehabilitation process as it now exists in practice in relation to this specific group does not unwittingly reinforce the patient's own sense of discontinuity with life about him. One of the first things any psychiatrist learns is that until he can actually see the world as the patient does he cannot begin to help the patient. The rehabilitation team is called upon to do this and something more. They are also called upon to restructure the environment in terms of the patient's needs. I say this with due regard to the advances being made in this direc-

tion by total push programs and the concept of the team approach. But I do believe that a further and qualitative change has to follow, a step perhaps analogous to the sheltered workshop, but where the concept of shelter provides considerable room for patient autonomy and where the concept of a workshop is extended to a total program for living.

In the absence of this type of resource what has tended to occur in the patients observed in the follow-up clinic is that old patterns reassert themselves. The patients, now no longer members of a captive audience, once again become either medico-philic or medico-phobic, depending on whether they are trying to push the whole experience behind them or seek to exploit the situation in the service of dependency needs.

There are only two ways a patient can rise to the occasion and regain a positive orientation to life. He can find the resources within himself with an assist from the outside or he requires a rather large scale type of social prosthesis to effectively regain a lost equilibrium. Until we are able to provide him with that we will continue to look in vain for that mysterious entity known as motivation somewhere within the ectodermal boundaries of the patient and never quite find it.

WATCH FOR SOMETHING NEW —
ISSUE OF JANUARY, 1962!

Diseases of the Vulva—Benign and Malignant*

STEWART A. FISH, M.D.**

The gynecologist encounters patients with two major types of vulvar disease. First, many of the conditions seen are entirely dermatologic in nature and are often manifestations of skin disease elsewhere on the body. Secondly, vulvar diseases develop which are specifically gynecologic in nature and occur because the vulva is part of the female reproductive system and is under the control of the female endocrine organs and cycle.

With this in mind, I would like to discuss from a practical stand-point the etiology, diagnosis and management of the vulvar diseases which we most commonly see as practitioners.

PURITIS VULVAE: Because itching is often the principal complaint of the patient, I will approach the subject of vulvar disease from a symptomatic stand-point first. Osborne and Stoll¹ have formulated a six point etiologic classification of anogenital puritis which I have found to be most helpful.

I. LOCAL PRIMARY IRRITATION: The greatest number of patients with vulvar disease seen by the gynecologist fall into this group. The various sources of local irritation are countless. Leucorrhea, even in minimal amounts, is probably the major offender. Leucorrhea produces vulvitis which is followed by itching and scratch dermatitis. If the condition becomes chronic there is often fissuring, scaling and thickening of the vulvar skin. Removal of the local irritation is the method of treatment. An accurate diagnosis of the cause of the leucorrhea is a necessity since appropriate treatment depends on the etiologic agent. The treatment of bacterial or yeast leucorrhea is often troublesome but is usually successful with the present day antibiotic and fungicidal preparations available. Leucorrhea due to *Trichomonas vaginalis* is still, in some instances, almost completely resistant to all forms of therapy.

Several other local irritants which commonly cause puritis vulvae must also be

mentioned. Highly alkaline soap preparations may be retained in the folds of the vulva and, because of daily repetition, may accumulate. When combined with minute fragments of fecal remnants intense puritis often develops. It is interesting to note that anogenital puritis is almost unheard of in geographical areas where only water is used for perineal hygiene after defecation and no soap or toilet tissue is known. This is explained by the fact that retention of sweat and sebaceous material protects the skin and mucous membranes from the irritating effects of vaginal discharge, alkaline soap preparations and minor abrasions due to rubbing.

I have found, as have others, that if the patient with so-called idiopathic vulvar and anal puritis will discontinue the use of soap and repeated perineal scrubbing and will instead use ordinary cleansing cream or lotion after defecation and bathing, much improvement and often complete remission of symptoms may occur.

II. CONTACT DERMATITIS:

Next to primary irritation, contact dermatitis is the most common cause of anogenital puritis. A large number of substances such as deodorants, suppositories, douche nozzles, toilet paper, nylon underclothing, nail polish, contraceptives, sanitary pads, medications excreted in the urine and some foods have been found to be offenders. The dermatologist can be of great help in these patients and in the absence of any obvious gynecologic cause for puritis, his advice should be sought.

III. Specific Dermatologic Diseases: Since the skin of the vulva is subject to any of the dermatologic diseases which may occur elsewhere on the body a large number of conditions fall into this group. These diseases include dermatitis medicamentosa, psoriasis, seborrheic dermatitis, miliaria, lichen sclerosis et atrophicus, lichen planus, parasitic infestations and many others. Here again the dermatologist may have a welcome suggestion and perhaps a cure for a troublesome puritis vulvae.

IV. Anorectal Diseases: I have already mentioned the role of anogenital hygiene

*Presented at the annual meeting of the Arkansas Medical Society, in Little Rock, Arkansas, April 17-19, 1961.

**The Department of Obstetrics and Gynecology, The University of Texas Southwestern Medical School.

as a possible cause for puritis vulvae. Specific anal diseases such as fissures, sinuses, fistulas, polyps, criptitis, hemorrhoids, proctitis and neoplasms must be considered. Pinworm infestation has often been suggested as a cause of vulvar puritis and should be considered, particularly if children in the household have been affected.

V. *Systemic Disease*: Probably the most important disease for the gynecologist to rule out in this group is diabetes mellitus. This condition can usually be diagnosed without difficulty and often the alert gynecologist discovers more latent or early diabetics than any other specialist. Successful treatment depends entirely on the control of the diabetes. Good control usually eliminates the puritis. I have found, however, that puritis will often persist in known mild diabetics who are taking oral hypoglycemic agents even though they may have a relatively normal blood sugar. When these patients are placed on insulin the puritis usually disappears. I believe this is a valid observation and I want to bring it to your attention if you have not already reached the same conclusion.

In addition to diabetes there are many other systemic diseases which may produce puritis vulvae but these are not usually primarily seen by the gynecologist.

VI. *Psychogenic Disturbances*: Undoubtedly there are instances of puritis vulvae and ani which are psychogenically precipitated. However, a sincere and careful evaluation of the patient must be made before this cause is seriously considered. All possible methods should be used to rule out organic disease as a cause of puritis vulvae and the patient should be given the benefit of the doubt.

When puritis vulvae is decided to be of emotional cause, a psychiatrist should be consulted. I would like to warn you against the use of hypnosis in the treatment of psychogenic puritis vulvae. Since this type of puritis is usually considered to be an hysterical conversion, it is unwise to displace or remove the symptom by the use of hypnosis as a psychotic break may follow. I recall a patient who had a large family and because she was Roman Catholic could not use contracep-

tives. She developed an intense puritis vulvae which occurred only at night and was of such intensity that it prevented her from having relations with her husband. She fell into the hands of a non-medical hypnotist and he displaced her puritis by post-hypnotic suggestion. She immediately suffered a psychotic break as a result of this and had to be hospitalized. This is only one example, but a significant one.

Benign Tumors of the Vulva: Many patients are first seen by the gynecologist with the complaint of a vulvar swelling. There are numerous causes which deserve discussion and I would like to mention some of the more common ones.

Hematoma: This occurs almost always following some type of straddle injury or too vigorous sexual activity. The diagnosis can usually be made by history. Occasionally spontaneous hematomas occur in patients with blood coagulation defects or leukemia. If the hematoma occurs in the region of Bartholin's gland one must be careful not to overlook an occult carcinoma as the underlying cause.

Infections: Furuncles and carbuncles occur frequently on the labia skin. They are treated as they would be elsewhere on the body. There are an increasing number of post partum patients with vulvar furuncles and quite often the organism is one of the resistant or "hospital type" staphylococcus. Accurate bacteriologic diagnosis and drug sensitivities should be carried out so that a proper antibiotic is used in treatment.

The granulomatous venereal diseases usually produce vulvar tumors. We do not have sufficient time to discuss this problem here but suffice it to say that any ulcerated lesion of the vulva should be thoroughly investigated from the bacteriologic and histologic standpoint. Biopsy is always indicated unless the lesion is proven to be of venereal origin. Even then if complete regression does not occur after treatment, biopsy should be performed.

Bartholin's Cyst: When Bartholin's gland becomes infected and antibiotics fail to prevent abscess formation, incision and drainage is usually performed. If recurrent abscess occurs, excision of the entire gland may be necessary. In many

instances interval excision of the gland does not have to be carried out if marsupialization is performed at the time of the drainage of the acute infection. In my experience this is a safe and useful procedure and may save the patient further hospitalization. This may also be the treatment of choice in the treatment of chronic Bartholin's cyst.

Vulvar Condylomata: Condyloma acuminatum are usually seen in pregnancy and are almost always associated with an intense leucorrhea. Treatment is usually unsuccessful until the vaginal discharge is cured. Podophyllin applied to the condylomata repeatedly is usually adequate treatment when a small number are present. If there are numerous lesions which extend into the vagina, surgical excision with the knife or electric cautery should be performed. Since podophyllin is nephrotoxic it should never be applied to large masses of condyloma for a long period of time or used after biopsy. Death from renal failure has been reported in such instances due to absorption of the drug.²

Neoplasms: A number of benign neoplasms of the vulva occur such as papillomas, fibromas and lipomas. If troublesome, these may usually be removed by simple excision. The hidradenoma or sweat gland tumor of the vulva must be mentioned here. This tumor is usually firm, non-ulcerated and when viewed microscopically may give the appearance of adenocarcinoma due to the glandular pattern present. As a rule if a vulvar growth is diagnosed as adenocarcinoma the operator should be absolutely certain he is not dealing with the benign and innocent hidradenoma. Simple excision is usually adequate therapy for this tumor.

Vulvar Leukoplakia: True leukoplakia is characterized clinically by thickening and fissuring of the vulvar skin and loss of the normal pigmentation. Microscopically there is a thick keratin layer present in addition to hypertrophy of the rete pegs and a marked hyaline change in the subepithelial zone. This accounts for the hardness and inelasticity which is present. Many other conditions produce whitening of the vulvar skin but almost all show atrophic changes microscopically and usually the only similarity to true leuko-

plakia is the thickened keratin layer. Good examples of this are lichen sclerosis et atrophicus and atrophic vulvitis. These conditions are definitely not likely to become malignant but if leukoplakia is superimposed or associated with one of these atrophic vulvar changes we have a different situation.

The malignant potentiality of leukoplakia is generally accepted but open to some dispute. Jeffcoate³ has pointed out that the only reason leukoplakia can be incriminated as a cancer precursor is that it can be demonstrated histologically in 50-80 percent of specimens of cancer of the vulva. However, the same type of epithelial activity seen in leukoplakia is seen in a number of other skin diseases in which chronic irritation is present. It thus seems reasonable to assume that leukoplakia is not so much a specific cancer precursor as it is evidence of long standing skin irritation and it is well accepted that this situation can lead to epithelioma in the susceptible person.

The treatment of leukoplakia is directed toward the removal of the locally irritant factors. If medical treatment proves ineffective then surgical excision of the affected area is necessary. All of us have had the experience of performing vulvectomy for extensive leukoplakia and having it recur afterwards. In my opinion this is not necessarily evidence that the local excision was inadequate but simply the same locally irritant factors continue to exist.

Carcinoma of the Vulva: Carcinoma of the vulva makes up about three percent of female genital cancers and less than one percent of all cancers. It occurs frequently enough to be considered as a significant cause of death, yet it is not sufficiently common for more than a few cases to be seen by any one person during his professional life unless a special effort is made to concentrate such cases at a particular hospital. It is one of the easiest cancers to diagnose and should, as other skin malignancies, rarely be the cause of death. Unfortunately, this is not the case and many lesions are far advanced when seen for the first time.

Age Incidence, Race and Parity: Carcinoma of the vulva is a tumor which usually appears later in life than other carci-

nomas of the female genitalia. The 60-70 year age group is most frequently affected, although it may occur in much younger women. Apparently race and parity are not related to the incidence of this tumor.

Symptoms: The symptoms are simple. A lump, sore, or ulcer are almost constant complaints. Puritis is very common and should always be investigated with carcinoma in mind, especially in older patients. Pain occurs frequently and is probably due to low grade secondary infection which often occurs soon after ulceration. Bleeding is rare even though an area 3 to 4 centimeters in diameter is involved. Dysuria may be a complaint if the lesion is near the urethra.

Diagnosis: The diagnosis of carcinoma of the vulva is made by biopsy. The important differential diagnoses are granuloma inguinale, lymphopathia venereum, chancroid, tuberculosis and condyloma acuminatum and latum. In any patient who presents an ulcerated or otherwise suspicious vulvar lesion the following diagnostic tests should be carried out: (1) multiple biopsies, (2) serological test for syphilis, (3) Frei test, (4) smear for Donovan Bodies, (5) Darkfield, and (6) smear and culture for Ducrey's organism and other bacteria.

Cancer Precursors: I have already mentioned the relationship of leukoplakia to carcinoma of the vulva and I will not pursue it further. Chronic granulomatous venereal diseases, which are largely confined to the Negro in the United States, must be seriously considered as true cancer precursors. Lunin⁴ found that 60 per cent of his cases of vulvar carcinoma had an antecedent history of some chronic vulvar granuloma. This re-emphasizes the fact that chronic irritation may be the important predisposing factor and not some specific type of skin disease.

Pathology: Squamous carcinoma makes up about 80 to 90 percent of vulvar cancer. Grossly the tumor may be fungating, eroding, flat or infiltrating. Histologically over half the tumors are highly differentiated squamous carcinomas with numerous areas of pearl formation. The least differentiated tumors are made up of round, polyhedral or spindle-shaped cells. There is usually much associated round cell infiltration and chronic infection. The

condition previously diagnosed as Bowen's Disease is now known to be intra-epithelial carcinoma and definitely precedes invasive carcinoma of the vulva.

Basal cell carcinoma makes up 2 to 4 per cent of vulvar malignancies. This lesion is similar to basal cell carcinoma (Rodent ulcer) found elsewhere on the body. Malignant melanoma is fairly common and makes up 5 to 10 per cent of the reported cases. The typical histologic pattern of malignant melanoma is seen. This tumor usually follows a rapidly fatal course. Other uncommon conditions such as Paget's Disease, sarcoma, adenocarcinoma and metastases from other tumors are occasionally encountered.

Growth Pattern: Locally most vulvar carcinomas are slow growing and spread via lymphatics. The present day accepted treatment is based on this knowledge. Metastases occur first in the superficial inguinal and femoral nodes. Following this the deep inguinal and femoral nodes are involved. All lymph channels then pass through Cloquet's node in the femoral canal and on to the external iliac, hypogastric and obturator groups.

Lesions in the region of the clitoris may metastasize to Cloquet's node without superficial node involvement. If the lower portion of the vagina is involved, the obturator and hypogastric nodes may be involved primarily.

Many cross lymphatic channels are present and palpable nodes or the lack of same are no indication of metastases. Contra-lateral involvement of nodes is common. There is general agreement that in slightly over one-half the cases the lymph nodes are involved when the patient is first seen.

Treatment: Death from carcinoma of the vulva if untreated is "particularly revolting" (5). There is massive destruction of the vulva with fecal and urinary incontinence and infection. Since the ureters are rarely involved the relatively pleasant death from uremia which often accompanies far advanced carcinoma of the cervix is not seen. Death is usually due to sepsis. Because of this slow destructive process it is thought advisable to excise or treat every lesion even if cure is not possible, since considerable palliation is achieved.

Surgery is the present treatment of choice. The accepted procedure consists of a radical vulvectomy and extensive bilateral groin dissection. The superficial and deep inguinal and femoral nodes are always removed en bloc. The external iliac nodes are usually resected to the level of the bifurcation of the common iliacs followed by removal of hypogastric and obturator groups. This is an extensive operation and it may be performed in either one or two stages, depending on the age and physical condition of the patient and the judgment of the operator. If the two-stage procedure is selected, the radical vulvectomy is performed first followed by the bilateral radical groin dissection after a reasonable interval. Lesser procedures such as wide local excision, hemivulvectomy, simple vulvectomy or radical vulvectomy without bilateral superficial and deep inguino-femoral lymphadenectomy are incomplete operations and do not give the patient the best chance for complete cure. About 90 per cent of the patients are operable when first seen and the operative mortality is relatively low at present due to the availability of blood, antibiotics and good anesthetic techniques.

Immediate postoperative complications which may occur are infection, thrombophlebitis, anemia, hypoproteinemia and delayed healing of the groin incisions. Late complications are few and most patients have little or no disability which is surprising considering the extent of the procedure. Chronic lymphedema of the lower extremities is fairly common but is usually controlled by elastic stockings and elevation of the legs. In younger women, marital relations are not interfered with and a number of cases of full term uncomplicated vaginal delivery have been reported in patients who have undergone this operation.

When recurrences occur they are usually confined to the vulva and may be dealt with by further wide local excision.

It is difficult at present to evaluate

treatment results since in many institutions no one particular method of treatment has been used for a long enough period of time to obtain statistically significant results. When there is nodal involvement the cure rate drops somewhat. For example, in Way's (6) series with positive nodes the five-year survival rate was 48 per cent and when there was no involvement it was 86 per cent. Way has also noted the very low survival rate if the deep nodes are involved and has questioned the value of dissecting the external iliac, common iliac and obturator nodes. Green (7) et al have also noted a similar five-year cure rate in their series.

Radiation is a modality which is not used except for palliative treatment. The vulva responds unfavorably to irradiation and much slough usually occurs with poor healing in most cases. Some good results have been reported from radiation but these are not generally accepted.

There are two exceptions to the above rules of treatment. When one is dealing with basal cell carcinoma local excision or radium is adequate therapy. If squamous carcinoma is found and can definitely be proven not to have extended past the basement membrane in any area (non-invasive or intraepithelial carcinoma) radical vulvectomy is the treatment of choice, groin dissection being unnecessary.

References

1. Osborne, E. D. and Stoll, H. L. J.A.M.A. 169: 127, Jan. 10, 1959.
2. Ward, J. W., Clifford, W. S., Monaco, A. R., and Bickerstaff, H. J. South. Med. J. 47: 1204, Dec., 1954.
3. Jeffcoate, T. N. A. Principles of Gynecology. Butterworth and Co., London, 1957.
4. Lunin, A. B. A. J. Obstet. and Gynec. 57: 742, 1949.
5. Way, S. Malignant Disease of the Female Genital Tract. Blakiston, Philadelphia, 1951.
6. Way, S. Am. J. Obstet. and Gynec. 79: 692, April, 1960.
7. Green, T. H., Ulfelder, H. and Meigs, J. V. Am. J. Obstet. and Gynec. 75: 848, April, 1958.

WATCH FOR SOMETHING NEW —
ISSUE OF JANUARY, 1962!

The Genealogy of the Medical Center*

WILLIS E. BROWN, M.D.**

Out on a hill a few miles west of here stands a monument to the devoted and untiring efforts of many men in Arkansas and elsewhere which is adding to the lustre of our State—in yet another field—Medicine. This great institution, The University of Arkansas Medical Center, is and should be the pride and joy of the whole State.

Recently, much has been said of its problems—which are real—and some slanderous remarks have appeared about its ancestry, implying some illegitimacy about its birth and the state of affairs regarding its parents at the time of its inception. Since no “Star in the East” was seen, it appeared desirable to review the circumstances of its conception, birth, early nurture, adolescence, and its emergence into manhood, to give perspective to its present struggles, I have found this research so fascinating that I thought you might be interested in a thumbnail sketch of the growth and development of this great Arkansas institution.

*As presented to the Rotary Club February 2, 1961.

**Professor and Head, Department of Obstetrics and Gynecology, University of Arkansas Medical Center, Little Rock, Arkansas.

The early settlers of our land were so busy with survival that education was not given much consideration. To be sure, there were the “Dames Schools” and other Traveling Teachers. I am sure that many a mother and father found time to “learn” their children the “3 R’s”. The fortunate few went East to prep schools, some to college, and the very few to the professional schools of Europe.

It soon became evident that several families could band together and do a better job “for the children” than the individual family, and as early as 1800 efforts in this direction appeared as private academies and colleges.

A few years before, in 1787, Congress had passed the Northwest Ordinance with these words:

“Religion, morality and knowledge being necessary to good government and the happiness of mankind, schools and means of education shall forever be encouraged.” It then made provision for the disposition of lands from which “The Indian title had been extinguished or might be extinguished later,” for the use of public education. The governor and township



Arkansas Industrial University at Fayetteville in 1879

commissioners were made responsible for these grants.

Thus the base of local control and support of common or, as we know it, public schools was established. However, these provisions proved only a gesture, even for the common school effort, and tuition or additions became necessary. The families boarded the teacher, paid him in hams, rice, et cetera, and the archives reveal several juicy scandals of the times. No provision was available for what we now call high schools, known then as prep schools, and there was no higher education in the State.

When Arkansas was made a Territory, it was established with the Northwest Ordinance of 1787 that 1/16th of each township would be set aside for the support of "common schools." The governor was authorized to select and to sell or to lease these lands and the monies obtained there-

FIRST ANNUAL ANNOUNCEMENT

—OF THE—

MEDICAL DEPARTMENT

—OF THE—

Arkansas Industrial University.

SESSION OF 1879-80.

LOCATED AT

LITTLE ROCK.

LITTLE ROCK:
PRINTED BY BLOCHER & MITCHELL, STATE PRINTERS AND BINDERS.
1879.

Flyleaf of First Catalog Arkansas
Industrial University Medical Department



First Medical School Building
113 West Second

from were to support common or public education.

During this time, considerable support also developed for a portion of these lands to be used for a "Seminary of Learning," or a University.

Because of a conflict between the governor and the Assembly regarding the handling of public lands and monies, our petition to Congress for Statehood expressly placed the control of these "Seminary Lands" in the hands of the Legislature. Within a few years, however, the climate had changed and the governor was authorized to sell that portion of the public township lands set aside for the Seminary of Learning.

Unfortunately, the law provided for sale at progressively lower prices. Thus land speculators, with the silent assent from the Legislature, did the rest and the demise of this early effort for a university was assured.

Soon after Arkansas became a state, Governor Yell in 1839 exhibited true concern for the lack of facilities and provision for higher education in the state. He, like other responsible citizens, became

concerned for "the education of our children." From his survey of the meager educational opportunities in Arkansas, he proposed a resolution to the Legislature with these words, 122 years ago this month:

"Then let me appeal to you, by the debt you owe your country, by the just claims of morality, religion and of freedom, let not the light of knowledge be extinguished in your hands, but, on the contrary, build to it honorable temples and imperishable altars that it may descend like the unclouded sun, bright and glorious to your posterity." Wasn't that a nice speech!

He proposed that a segment of public lands should be set aside for higher education as they were for common education. This resolution met with support in Arkansas. Although Governor Yell clearly saw the need for establishing a communal base for higher education, he unsuccessfully importuned the Federal Government to consider this matter. With Governor Yell's death in the Mexican War, the early efforts for public support of higher education were abandoned.

Thus, the first effort to reproduce ourselves in the field of higher education ended in abortion.

While his plea apparently fell on deaf ears, ten years later Representative Morrill of Connecticut became concerned regarding the same problem and in 1859 introduced into Congress a bill to establish the concept of Public Lands as the

support base for "education of the masses above the common school level." His bill, ultimately known as the Land Grant College Act, was passed by both Houses in 1859, but was vetoed by President Buchanan. Arkansas representatives in Congress split on this issue, although the majority, in keeping with the sentiment at home, voted nay, and Congress was unable to override the veto.

Two years later, in 1861, 100 years ago, Senator Morrill modified his bill and reintroduced it to Congress. Following his earlier defeat, Senator Morrill recognized that in order to gain the support of both the agricultural states of the midwest and the rapidly industrializing states of the east, he must compromise, so he emphasized these features: He made it clear that "The farmer was the highest epitome of independence and industry and must be educated to achieve and maintain his position . . . ; hence, education in arts and sciences were essential to his evolution as the dominant member of society and the Body Politic. . . ."

This bill passed in January of 1862. According to incomplete records, it appears that while the majority of the Arkansas delegation supported this bill, the representatives from Arkansas were not recognized.

What is the Land Grant College Act? It provided 30,000 acres for each senator and representative, to be taken from public lands for "Education of the masses in mechanical arts and agriculture."

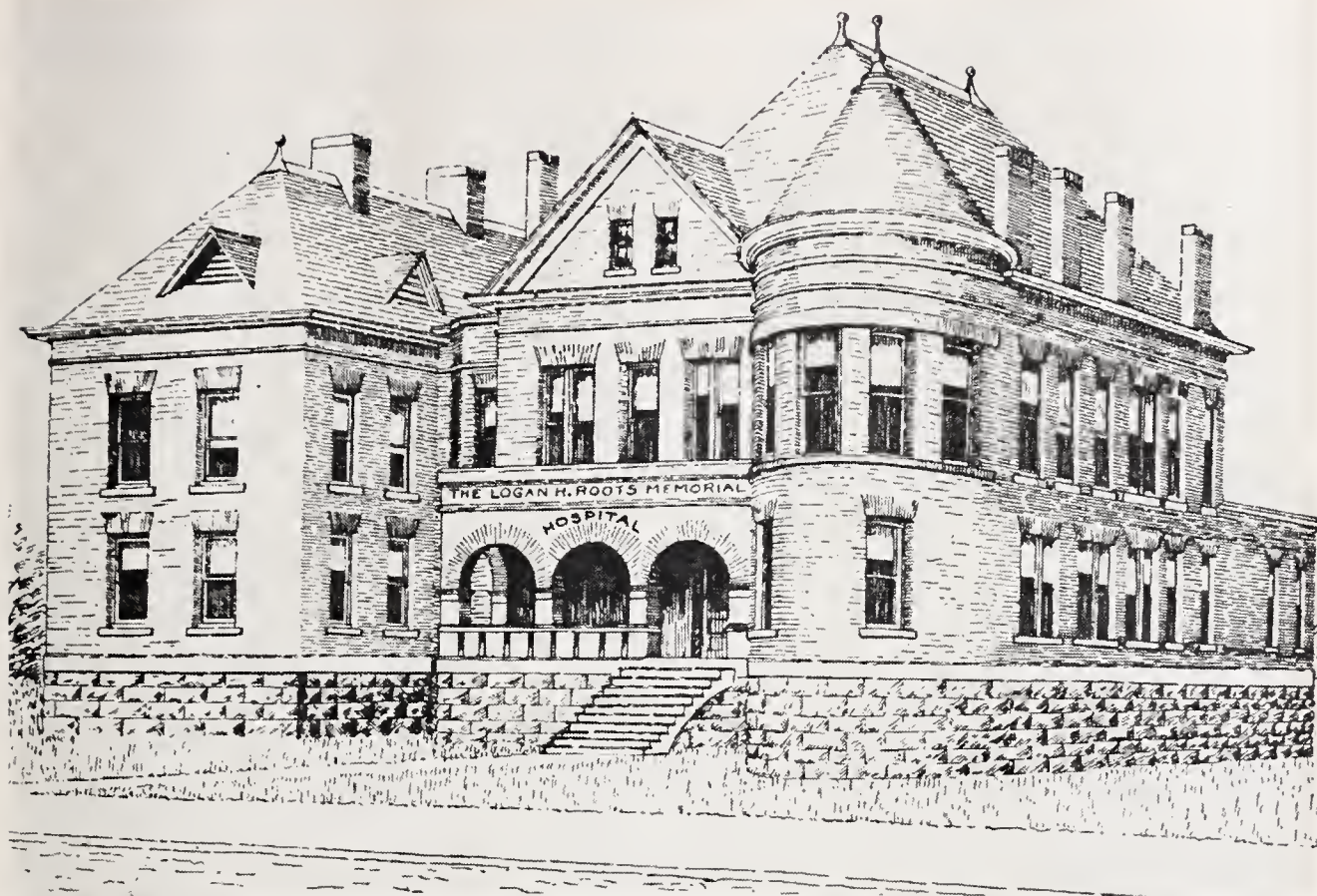
Following the passage of the bill but before its implementation, a certain unfortunate belligerency developed among these United States. The only action during the next few years was to establish mechanisms of implementation.

This bill was the legitimate grandfather of the Medical School and in the language of the Genealogist, established the beginning of the line. We are ever grateful to Governor Yell and his foresight—to Senator Morrill for his industry, and to the Congress of the United States for establishing the concept of Public Lands for Higher Education.

The next few years were confused by belligerency and altercations. In 1863, there were two capitol and two governments in Arkansas. The government in



Second Medical School Building
123 Sherman



Logan H. Roots Memorial City Hospital operated in conjunction with the second Medical School Building. It was located at 125 Sherman.

Little Rock and the northern half of the State became established, sought readmittance to the Union, and requested the implementation of the Land Grant Act for Education.

So beclouded were these days and so dubious was the authority of this government that its request was not recognized. Throughout the era of the military government which interrupted these efforts for Public Lands, negotiations and agitations continued, and reflect the true concern of our forebears for higher education for their children.

I suppose one might call this interval a "Sterility Case."

In due season, Arkansas was re-admitted to the Union and local civil government was re-established. Under its leadership, the item of Public Lands for Higher Education was re-asserted. After several false starts, finally the General Assembly of 1871 passed the "Organic Act" which authorized Governor Hadley to appoint a Board of Education to implement the principles of the Land Grant College Act.

There was much to be done and little time to do it, as the statutory limit was approaching, namely, February 12, 1872. The Board dispatched several exploratory committees . . . to the East to learn of the arts and science schools; to the Midwest for the applied science of agriculture and industry; and to Washington to learn of the terms of "acceptance" of the Land Grant provisions.

They reconvened in Little Rock in November of 1871 and reported on their findings. One item of personal interest enters the picture. The committee to the Midwest was most impressed with the campus of the University of Illinois. These were copied and became in 1875 "Old Main" of our delightful Fayetteville campus.

At the time of that visit by the Committee of the Board, certain of my own forebears were students at the University of Illinois. My father received a degree from Illinois and began his teaching career at that institution. It is with considerable romance and nostalgia that I find myself participating in an educa-



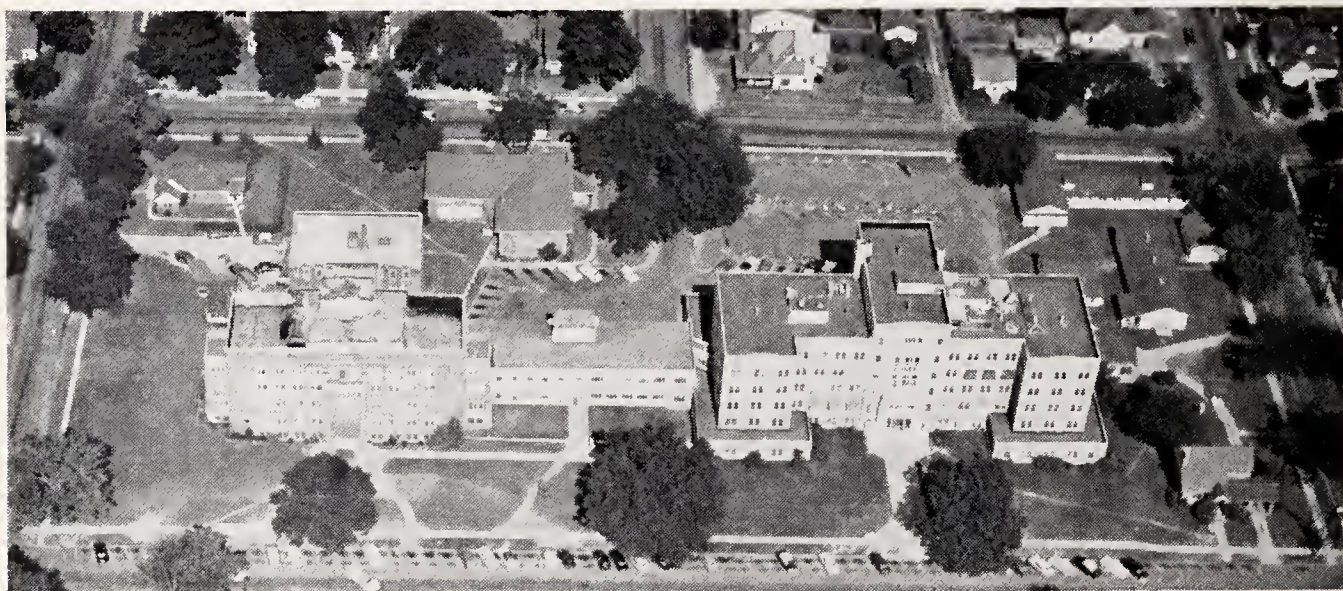
The First State Capitol as a Medical School Building between the first and second school building.

tional program in which "Old Main" exists on both my father's campus and my present campus.

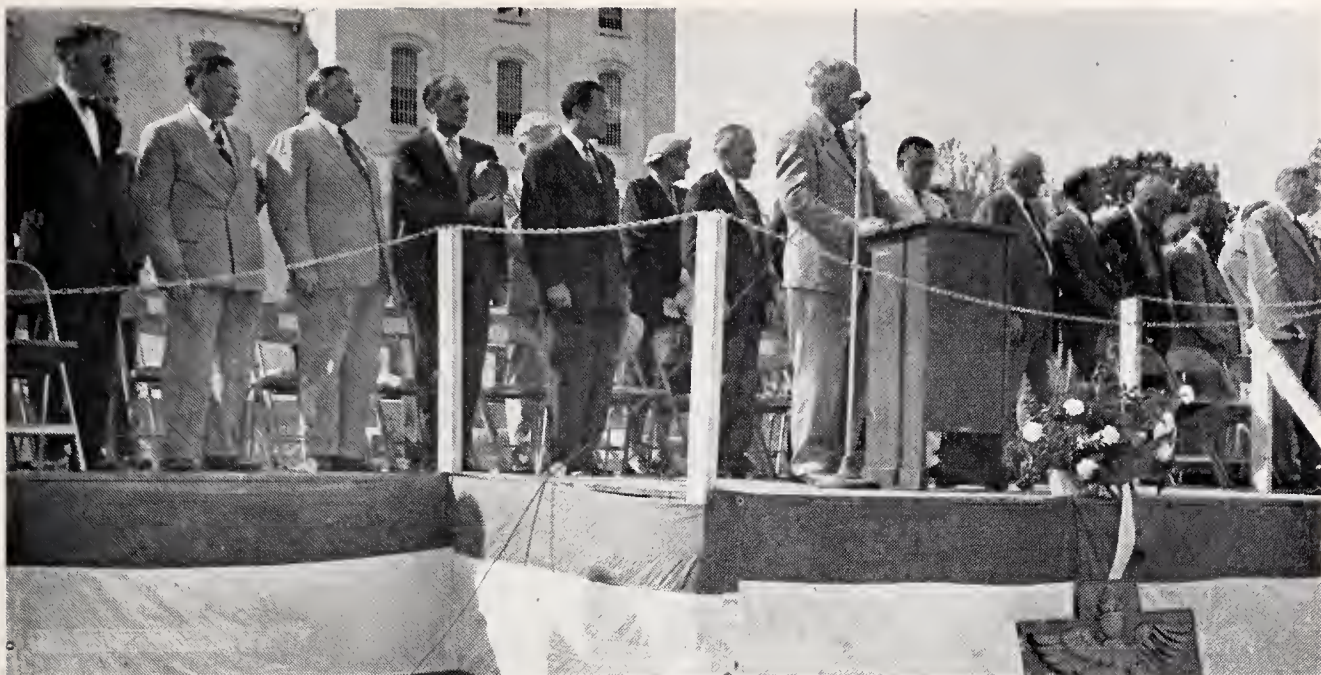
The second act of the Board was to "advertise." The Land Grant Act provided the total acres from public lands were to be sold to support education. Our Legislators of that day wisely decided that these monies should not be used for construction but for endowment or support. The grounds and buildings were to be subscribed by the host community. Thus the location of the Arkansas Industrial University was on the market to the highest bidder.

Several areas entered the competition—only three of which warrant reciting here. It is of interest that only a few areas of the State were sufficiently interested to consider the matter at all. It appears from the record that those interested areas were primarily in the northern half of our State. Batesville, which subsequently acquired an institution of higher education, was high on the list and pledged \$100,000 in bonds for the construction of the University. Little Rock and Pulaski County has the dubious distinction of being the only area which considered the item and defeated the proposal 450 to 73. Letters to the Editor in the Gazette are indeed revealing in that they suggest the later conflict of interest over the Medical Center. One point of view was that the University should "naturally be here" at the center of culture, and the other was that we were not ready for higher education. Such ideas are expressed today, even though in slightly different terms.

Fayetteville and Washington County with its three colleges won out. They provided \$150,000 bond issue and offered 600 acres of land. To be sure, there was opposition from Cane Hill College, Arkansas College, and the Female Seminary. However, the level of higher education had so infiltrated the community that they over-subscribed the bond issue. That they had to be haled into court ten years later and required to pay up notwithstanding,



City Hospital, Isaac Folsom Clinic and University of Arkansas School of Medicine between 11th & 13th Streets on McAlmont Street.



Ground breaking for the new Medical Center. Hon. Sidney McMath, Louis Webster Jones, President of the University-Hayden C. Nicholson, M.D., Dean attending.

this area of our State was most receptive to higher education.

The Board met in Little Rock in December of 1871 and declared the bid of Fayetteville valid and accepted, and declared the opening of school for January 28, just 14 days ahead of the final date. To the surprise of all, 101 students in the normal (prep) and college divisions showed up, and matriculated in a reconstructed farm house. Thus began the Arkansas Industrial University, the legitimate Mother of the Medical Center. The Medical School now had a mother and grandfather.

The beginnings of Medicine in Arkansas are lost in the mists of the past. The early records reveal physicians and surgeons coming here from medical schools in the East and abroad. The first Fayetteville faculty roster of the University lists a Richard Thurston, M. D., of Van Buren, who was paid \$480 for teaching. It was to be a long time before other physicians were paid for their educational contributions to the University.

By 1870, however, there was a sufficient number of physicians with active interest, who constituted themselves as the Arkansas Medical Society. This Society engaged in both scientific and political activity for the uplift and regulation of health, medical care, and medical prac-

tice. This body became the true father of the Medical Center.

There were frequent exchanges between the Board of Trustees of the University and the Officers of the Medical Society anent the establishment of a Medical Department. It was a difficult and protracted courtship . . . The Father seeking a Mother for its son.

The fact that the University was permanently located in Fayetteville, away from the cultured business, legislative, and more important medical center of the State posed problems to both parties. The lack of clinical material for medical instruction in Fayetteville and the indifference of the Board of the University led President Linthicum of the Medical Society to explore the establishment of a Medical Department of St. Johns College here in Little Rock. As nothing came of this flirtation, the Medical School escaped being a bastard child of the University.

Eventually, in 1879, with the support of and for the State Medical Society, certain physicians of Little Rock under the leadership of Doctor Hooper formed a stock company and inaugurated a medical school for the state. The University accepted this institution as the Medical Department of the University, granting degrees to the graduates, but stipulated it would assume no financial responsibility for its support. It was 65 years before this fiscal irre-

sponsibility was reversed. Thus a child was born—loved and supported by its father—and spurned and ignored by its mothers.

The fledgling premature infant was supported by the physicians of Little Rock; by the City, which made available the clinical facilities of the city hospitals, by student fees, and by the State Medical Society.

The Medical Society established a Board of Visitors who annually visited the School for inspections and recommendations, and reported their findings both to the School and the State Society. It would be good if we had a Board of Visitors today.

The State Medical Society and the physicians of Little Rock who served as the faculty repeatedly pressed both the University and the Legislature for financial support without avail. Nevertheless, the "young 'un" continued to grow, was soon out of diapers, and recognized by the Association of American Medical Colleges in 1890, in which year the curriculum was extended to 4 years of 6 months each, and there were 83 students with 17 graduating. Despite the fact that this enrollment compared favorably with the Fayetteville campus of 113 students with 7 graduates, neither the Legislature nor the University supported this fledgling.

In 1906, a second medical school, the College of Physicians and Surgeons, was established. This institution likewise was self-supporting and, while it struggled manfully for its progeny, little was added to medicine in Arkansas.

At the 1909 meeting of the Arkansas State Medical Society, a committee was appointed with Doctor Young of Springdale its Chairman, with three objectives. 1) To persuade the two faculties of medicine to merge, to combine their acquired properties and equipment and to deed them to the State. 2) To persuade the General Assembly to accept these properties, making the combined school an integral part of the University and providing for its support, and 3) To induce the State to build and maintain a Charity Hospital in connection with and under the control of the University School of Medicine.

The first two of these objectives was accomplished by 1911, but it required nearly 50 years for the third, the Hospital.

In accepting this gift, the Legislature—note, *not* the University, "pledged the faith and credit of the State to forever maintain and operate a first class Medical College as a part of the University, with the course of study, methods of instruction and equipment of standards equivalent to that required of Medical Colleges by the Association of American Medical Colleges."

However, the Legislature adjourned without appropriating any funds for such a fine purpose. As the Legislature prepared to move to the new Capitol in 1913, it passed a resolution making available the 75 year old State Capitol Building for use of the Medical School, and in the same year Dean Smith, a graduate of the University, presented a budget of \$50,000. According to the Gazette: "A huge laugh went up from the solons when that request was presented, who regarded the maintenance of a medical school as the wildest extravagance." However, the youngster had grown up enough to be granted an allowance from its foster father — the Legislature appropriated \$36,000.

There were further appropriations by the Legislature to the Medical Department directly. It was not until 1945 that the appropriation for the University included monies for the School of Medicine.

Because of financial and other stringencies, the school lost its accreditation and reverted to a two year preclinical school in 1918. The State Medical Society Committee was still working on its third goal, namely, a hospital. These developments, plus the persuasive powers of Dean Smith induced the Legislature in 1920 to appropriate \$500,000 for the hospital. Unfortunately, the State Penitentiary was in debt, and where do you suppose the funds went? You guessed it—they were subsequently diverted to the Penitentiary. This was to prove a major setback to the growth of the Center.

The City of Little Rock again came to the rescue with the completion of the new City Hospital at MacArthur Park, making these facilities available to the Medical School, and clinical instruction was resumed. In 1935, the modern Medical School building was constructed with W.P.A. funds, adjacent to the hospital,

and in 1939 the State leased the City Hospital to complete the first combined unit for the Medical School, and the University Medical was again accredited by the Association.

The next decade showed the halting and erratic progress of an adolescent, with some recessions. Despite its dubious birth, several stepfathers, and an indifferent mother, it eventually began to show the fuzz of manhood on the chin, flexed its muscles, and whistled at the girls. These signs of approaching manhood were recognized by Governor McMath and, with many assists from an aroused public, the medical profession, and "Smokes for the Medical Center," the Legislature and the University accepted the Medical Center plan.

The balance of the story is known to most of you. After a hectic courtship, in the summer of 1956 the young man, dressed in the most modern finery, went out to meet his bride—the aspiring students of medicine and the sick of the State. The Medical Center was a fact.

The indifferent mother now beamed in pride. The sugar daddy (the Legislature) chortled, "That's my boy!" Its foster parents celebrated the event. All of education and medicine, not only in Arkansas but

across the country, were celebrants at the wedding feast in the spring of 1957. And its true father, the Medical Society, quietly but proudly looked on from the wings.

As with all marriages, there comes a day when the ring on the bathtub is more noticeable than the ring on her finger. It is not surprising that there are frictions among the foster parents, the in-laws, and other sundry shirt-tail relatives, and the bride and groom. And one shouldn't be too surprised if the newlyweds have to send home for some extra cash now and then.

These are trying times but should not be unexpected. Given time and helpful support, guidance and counsel, this young man will gain maturity and judgment, the better to participate in the health affairs of the State.

The conflicting efforts of the many relatives to claim parentage and the right to "guide" this young man incite confusion and chaos. It is to be hoped that concert of effort rather than competition will lead this young man to medical maturity in the service of our people.

The Medical Center is truly a magnificent young man, alert to its responsibilities and eager to be about its several



University of Arkansas Medical Center, Summer, 1961

THE GENEALOGY OF THE MEDICAL CENTER

fathers' business. It is a campus of over 600 students in its five health related schools, that care for over 70,000 sick in its clinics and 10,000 in the hospital yearly, yes, and participates in the arrival of 2,500 new Arkansans yearly. It attracts and spends over \$1.5 million in non-University research funds, and does many

things for many people.

This is truly an eager young man, enthralled and stimulated by his future, who will serve his people well, from whom he has had his birth.

This is the genealogy of the Medical Center. Aren't you proud to be a part of his ancestry!!!

**WATCH FOR SOMETHING NEW —
ISSUE OF JANUARY, 1962!**

♦ What's NEW ♦

Cushing's Syndrome in an Adolescent Girl*

DAVID H. JAMES, JR., M.D.**

Cushing's syndrome in children prior to the onset of adolescence is almost always due to a carcinoma of the adrenal cortex. Through 1956¹ at least twenty-nine well documented cases of the syndrome associated with an adrenal malignancy in childhood had appeared in the literature. There is general agreement that the treatment in these cases should consist of surgical excision plus the use of replacement therapy with steroids and other supportive measures.

On the other hand, Cushing's syndrome in the adolescent age group is frequently not associated with an adrenal neoplasm². The adrenal glands in these patients may show moderate-to-marked hyperplasia or may appear normal, both grossly and microscopically. The etiology in these cases is not well understood and the treatment must be individualized.

The following case illustrates some of the problems encountered in the diagnosis and management of Cushing's syndrome in an adolescent girl.

CASE REPORT

G. A. was first seen as an out-patient on March 10, 1959 at 15 and one half years of age. Her complaint at that time was excessive weight gain in spite of dietary restrictions and the use of an appetite suppressor.

History revealed that she had been in good health until September, 1958 at which time she began gaining weight quite rapidly. During the ensuing six months she gained from 130 to 175 pounds. In December, 1958, she was started on a 1200 calorie diet and was put on an appetite suppressor (Levonor—5.0 mgm. t.i.d.)

In February, 1959 she began having frequent generalized headaches. The men-

strual periods, which had been normal since her menarche in January, 1958, ceased following a normal period in January, 1959.

Physical examination revealed a markedly obese, adolescent girl. A moderate amount of acne was present but no striae were observed. There was a thick fat pad in the interscapular area which extended up onto the neck. Her weight at this time was 175 pounds and the height was 61 and one half inches. Blood pressure was 125/90.

On March 26, 1959 she was admitted to Crittenden Hospital (West Memphis, Arkansas) for evaluation. Examination at this time was unchanged except that there had developed some bluish striae over the hips, the inner aspect of each thigh, and on both arms.

Laboratory work revealed a hemoglobin of 17.8 grams percent, a red blood cell count of 5,950,000 and a white blood cell count of 15,200 with a normal differential. Urinalysis was normal. A post-prandial blood sugar was 114 mgm. %, serum sodium was 150 meq./lit. and serum potassium was 4.4 meq./liter. A protein bound iodine was 5.4 micrograms %. Urine 17-Ketosteroid excretion was 23.5 mgm./24 hours and urine 17-Hydroxycorticoid excretion was 23.9 mgm./24 hours. X-rays of the skull and lumbar vertebrae were normal.

From these findings it was felt that she had Cushing's syndrome. She was sent home for a few days and was then admitted to Le Bonheur Children's Hospital (Memphis, Tennessee) for further evaluation.

Initial physical examination at Le Bonheur Hospital revealed a markedly obese girl who weighed 169 pounds and was five feet, one inch tall. Blood pressure was 126/90. Her expression was apathetic and she had a round "moon" face.

*From the Division of Pediatrics, College of Medicine, University of Tennessee, the LeBonheur Children's Hospital, Memphis, Tennessee, and the Crittenden Memorial Hospital, West Memphis, Arkansas.

**200 South Rhodes Street, West Memphis, Arkansas.

There was a large "buffalo-type" fat pad over the posterior cervical and interscapular area. Marked facial acne was noted and there were many bluish-purple striae over the lower abdomen, the inner aspect of both thighs, and on both arms.

Laboratory work revealed a hemoglobin of 14.4 grams %, a red blood cell count of 4,710,000 per cubic millimeter and a white blood cell count of 15,500 per cubic millimeter with a normal differential and adequate thrombocytes. Urinalysis was normal. A total eosinophil count was 40 per cubic millimeter and a protein bound iodine was 4.1 micrograms %. Blood chemical determinations revealed the following: CO_2 of 25 meq./lit., chloride of 103 meq./lit., sodium of 143 meq./lit. and potassium of 4.5 meq./lit. An oral glucose tolerance test revealed a "diabetic-type" of curve as follows: fasting-96.0 mgm. %, 30 minutes-213 mgm. %, 1 hour-259 mgm. %, 2 hours-203 mgm. %, 3 hours-109 mgm. %, 4 hours-66 mgm. %, and 5 hours-84 mgm. %. The 17-Ketosteroid excretion was 23.5

mgm./24 hours and the 17-Hydrocortoid excretion was 23.9 mgm./24 hours.

Roentgenograms of the long bones showed no abnormality. An intravenous pyelogram revealed a well defined shadow above the left kidney in the adrenal area. This measured 4.0 cm. at the base and had a vertical height of about 4.0 cm. No similar shadow was seen above the right kidney. The collecting system appeared normal bilaterally. It was the impression of the radiologist that the shadow over the left kidney might represent a slightly enlarged adrenal gland.

A gynecological consultant could find no abnormality on pelvic examination. He agreed that the most likely diagnosis was that of Cushing's syndrome.

The patient was sent home for a few days and was re-admitted on April 16, 1959 for an exploratory laparotomy. Physical examination and laboratory findings remained essentially unchanged.

On April 20, 1959 a transabdominal exploratory laparotomy was carried out.

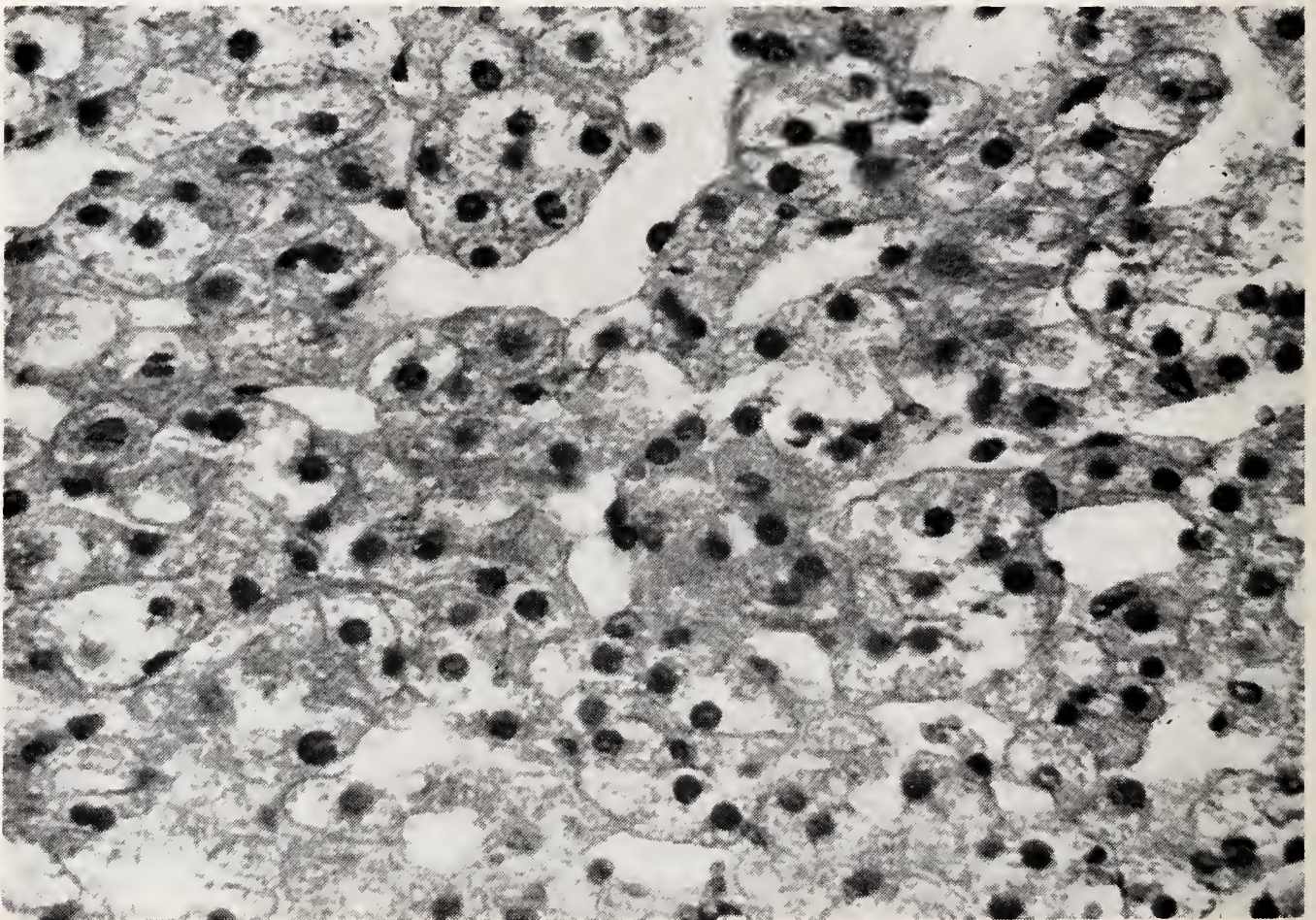


Fig. 1

Microscopic section from the biopsy specimen of the adrenal gland, revealing normal adrenal cortical tissue.

Both adrenal glands were found to be normal in size, shape, color and consistency. A biopsy was taken from each adrenal gland and microscopic examination (Fig. I) revealed no signs of hyperplasia or of any other abnormality. Biopsies of each ovary and of the liver also revealed normal tissue, both grossly and microscopically.

Since both adrenal glands appeared normal it was felt that adrenalectomy (either partial or total) was not indicated. The abdomen was therefore closed and the operation completed. The post-operative course was smooth and she was discharged on May 1, 1959 to be followed as an out-patient.

In June, 1959 it was recommended to the parents that the girl be given x-ray treatment to the pituitary gland. However, for various reasons this advice was not accepted. She was taken to a chiropractor and then to a "cultist" in a desperate effort to have the condition "cured."

The child slowly, but progressively, became worse and in September, 1959 she was returned for further medical treatment. At that time, she was referred to the University of Arkansas Medical Center (Little Rock, Arkansas) for further evaluation and consideration of irradiation of the pituitary gland.

On September 28, 1959, irradiation was begun and she received a total of 5000 gamma roentgens to the pituitary area over a six week period. The course was completed on November 11, 1959.

During the month following completion of the irradiation, she became progressively worse. She became markedly depressed and easily agitated. Her weight increased to 197 pounds and there developed numerous purplish striae over the abdomen, thighs and arms. She developed marked low back pain and there was x-ray evidence of moderate osteoporosis.

In view of the rapidly downhill course, plans were made to perform a bilateral total adrenalectomy. She was therefore admitted to Crittenden Hospital on December 7, 1959 for this procedure (Fig. II). However, laboratory work on this admission revealed a total eosinophil count of 668 per cubic millimeter, a 17 Keto-steroid excretion of 3.4 mgm./24 hours and a 17-Hydroxycorticoid excretion of 5.7

mgm. 24 hours. In view of these signs of laboratory remission she was discharged to be followed as an out-patient.



Fig. II
(a and b)

Patient one month following completion of irradiation of the pituitary gland, illustrating the apathetic, "moon facies", "buffalo hump", striae, and obesity.



In oral penicillin therapy

COMPOCILLIN-VK

offers the speed, the certainty,

the effectiveness

of this...



*with the safety
and the convenience
of this...*



IN ORAL PENICILLIN THERAPY COMPOCILLIN[®]-VK

POTASSIUM PENICILLIN V

BECAUSE potassium penicillin V (Compo-cillin-VK) offers excellent absorption^{1,2,3,4}—fast, predictable levels of antibacterial activity enter the blood stream and quickly reach the site of infection. *Absorption takes place high in the digestive tract and is virtually unaffected by gastric media.*

Antibacterial levels are so predictable that, in many cases, *Compocillin-VK may be prescribed in place of injectable penicillin.* This is especially appreciated by younger patients and—as you know—oral administration is considered far safer than injectable.

Compocillin-VK is well tolerated and may be used in treating mild, severe, and in high dosage ranges, even critical cases involving penicillin-sensitive organisms. It comes in stable, palatable forms for every patient—every age.

There are tiny, easy-to-swallow Filmtab[®] tablets—125 mg. and 250 mg. (200,000 units and 400,000 units), a tasty, cherry-flavored suspension (each 5-ml. teaspoonful contains 125 mg.) and two combinations (Filmtab and suspension) with the triple sulfas. Depending on severity of infection, dosage for Compocillin-VK is usually 125 mg. or 250 mg. three times a day. Won't you try Compocillin-VK?

1. R. Lamb and E. S. Maclean, Penicillin V—A Clinical Assessment After One Year, *Brit. M. J.*, July 27, 1957, p. 191-193. 2. J. I. Burn, M. P. Curwen, R. G. Huntsman and R. A. Shooter, A Trial of Penicillin V, *Brit. M. J.*, July 27, 1957, p. 193. 3. J. Macleod, Current Therapeutics, *The Practitioner*, 178:486, April, 1957. 4. W. J. Martin, D. R. Nichols and F. R. Heilman, Observations on Clinical Use of Phenoxymethyl Penicillin (Penicillin V), *J.A.M.A.*, p. 928, March 17, 1956.



In early January, 1960, she began losing weight, the acne began subsiding and all the other signs and symptoms of Cushing's syndrome gradually began to regress. The following month she had her first menstrual period in over a year.

By June, 1960 she had lost about 25 pounds and all of the stigmata of Cushing's syndrome had receded markedly. The urinary excretion of 17-Ketosteroids and 17-Hydroxycorticoids had remained at a normal level.

Seventeen months after completing the x-ray treatment (Fig. III) there were no signs or symptoms of Cushing's syndrome. She was leading a normal life and was taking part in all the usual school and extracurricular activities of a high school senior.

DISCUSSION

This girl presented nearly all of the characteristic signs and symptoms of Cushing's syndrome. During the early stages, there was the onset of progressive obesity, amenorrhea, "moon-facies", a "buffalo-hump", acne and muscular weakness. Later there developed low back pain, osteoporosis, striae of the abdomen and

extremities, headache, slight hypertension and marked mental depression. Significant laboratory tests revealed a low total eosinophil count, a diabetic-type of glucose tolerance curve and marked elevation of the urinary 17-Ketosteroid and 17-Hydroxycorticoid excretion. After ruling out the possibility of an adrenal neoplasm by transabdominal exploratory laparotomy she was treated by irradiation to the pituitary area. This produced a complete remission which has persisted until the present time.

In a recent report from the Mount Sinai Hospital (New York City) Soffer², et al reviewed the findings in fifty patients with Cushing's syndrome, all but one of whom were over ten years of age. Histologic examination of the adrenal glands were obtained in all but five cases. Twenty-one patients were found to have tumors of the adrenal cortex. Thirteen of these were malignant and eight were benign. Eleven patients had varying degrees of hyperplasia of the adrenal cortices. However, the other thirteen patients had normal-appearing adrenal glands, both grossly and microscopically.

There is general agreement that the signs and symptoms of Cushing's syndrome are due to hypersecretion of the adrenal cortices. However, in those cases without a tumor, it has not been determined whether the primary disturbance is in the adrenal gland itself or if the hyperfunction is secondary to overstimulation from the pituitary gland or elsewhere.

Grumbach³ has suggested the possibility that in these non-tumorous cases there may be an intrinsic abnormality in the enzymatic biosynthesis of C 21 steroids or that chronic ACTH stimulation has altered the enzyme systems involved in the formation of corticosteroids. On the other hand, Liddle⁴ and Jailer⁵ have postulated that the pituitary gland in this condition may secrete excessive amounts of a "corticotrophic" or "growth" factor (distinct from ACTH) which acts on the adrenal to increase its responsiveness.

Recently, Nugent⁶ has demonstrated that a fairly constant elevation of the plasma level of 17-Hydroxycorticosteroids can be produced in some normal subjects by the constant intravenous infusion of small amounts of ACTH (1.5-5.0 I.U. per



Fig. III

Patient seventeen months following completion of pituitary irradiation. She is in complete remission.

day), calibrated in such a way that there would be no measurable elevation of the blood ACTH level. He postulates that Cushing's syndrome associated with adrenal hyperplasia or normal adrenal glands may result from a fairly constant secretion of a small amount of ACTH by the pituitary gland.

The treatment for the non-tumorous cases of Cushing's syndrome is not as well worked out as it is for those cases with adrenal neoplasms. However, because of the operative risks, the possibility of post-operative complications^{7,8} and the need for permanent replacement therapy, bilateral adrenalectomy should probably be reserved for those cases with severe signs and symptoms and/or those who have failed to respond to more conservative treatment^{2,9}.

In Soffer's series² twenty-three non-tumorous cases were treated with pituitary irradiation, unilateral adrenalectomy, or a combination of both. Of this group, seventeen had a satisfactory remission. He concludes that probably no more than one-third of all patients with non-tumorous adrenal cortical hyperfunction require bilateral adrenalectomy.

SUMMARY

A case of Cushing's syndrome in an adolescent girl is reported.

Some of the problems encountered in the diagnosis and management of such a case are illustrated.

The etiology and treatment of non-tumorous cases of Cushing's syndrome are briefly discussed.

I wish to thank the members of the

Radiology Department of the University of Arkansas Medical Center, Little Rock, Arkansas who administered the irradiation to the pituitary gland in this patient.

References

1. Guin, G. H., and Gilbert, E. F.: Cushing's Syndrome in Children Associated with Adrenal Cortical Carcinoma. A case report with review of the literature, *J. Dis. Child.* 92:297, 1956.
2. Soffer, L. J., Iannaccone, A., and Gabrilove, J. L.: Cushing's Syndrome. A Study of Fifty Patients, *Am. J. Med.* 30:129, 1961.
3. Grumbach, M. M., Bongiovanni, A. M., Eberlin, W. R., Van Wyk, J. J., and Wilkins, L.: Cushing's Syndrome with Bilateral Adrenal Hyperplasia: A Study of the Plasma 17-Hydroxycorticosteroids and the Response to ACTH, *Bull. John Hopkins Hospital.* 96:116, 1955.
4. Liddle, G. W., Island, D., Rinfret, A. P., and Forsham, P. H.: Factors Enhancing the Response of the Human Adrenal to Corticotropin: Is There an Adrenal Growth Factor? *J. Clin. Endocrinol.* 14:839, 1954.
5. Jailer, J. W., Longson, D. and Christy, N. P.: Cushing's Syndrome-An Adrenal or Pituitary Disease? *J. Clin. Endocrinol.* 16:1276, 1956.
6. Nugent, C. A., Eik-Nes, K., Kent, H. S., Samuels, L. T., and Tyler, F. H.: A Possible Explanation for Cushing's Syndrome Associated with Adrenal Hyperplasia, *J. Clin. Endocrinol.* 20:1259, 1960.
7. Salassa, R. M., Kearns, T. P., Kernohan, J. W., Sprague, R. G., and MacCarty, C. S.: Pituitary Tumors in Patients with Cushing's Syndrome, *J. Clin. Endocrinol.* 19:1523, 1959.
8. Nelson, D. H., Meakin, J. W., Dealy, J. B., Jr., Matson, D. D., Emerson, K., Jr., and Thorn, G. W.: A Corticotropin Producing Tumor of the Pituitary Gland, *New England J. Med.* 259:161, 1958.
9. Soffer, L. J., Eisenberg, J., Iannaccone, A., and Gabrilove, J. L.: Cushing's Syndrome, in *Ciba Foundation Colloquia on Endocrinology*, Vol. 8, Boston, Little Brown and Company, 1955.

WATCH FOR SOMETHING NEW —
ISSUE OF JANUARY, 1962!

A TEACHING SEMINAR
FROM THE
UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE

Constitutional Non-Hemolytic Forms
Of Jaundice*

KERRISON JUNIPER, JR., M.D.**

In recent years there have been numerous reports of patients with constitutional non-hemolytic forms of jaundice with varying clinical pictures (1, 2). Constitutional jaundice is the result of a physiologic defect somewhere in the normal metabolic pathway of bilirubin transport and excretion. Although these cases are not great in number, they should be seen occasionally by most physicians. In the past, when the clinical syndromes of constitutional jaundice were not recognized, these patients usually were given a diagnosis of chronic hepatitis. In some instances exploratory laparotomy was performed because of a mistaken diagnosis of

cholecystic disease. Since the prognosis is good in most forms of constitutional jaundice, these conditions should be diagnosed correctly and differentiated from true chronic hepatitis, a disease with a poor prognosis. This paper will be a discussion of the nature of the defects in these diseases and the clinical picture which they present.

POTENTIAL SITES OF DEFECTS

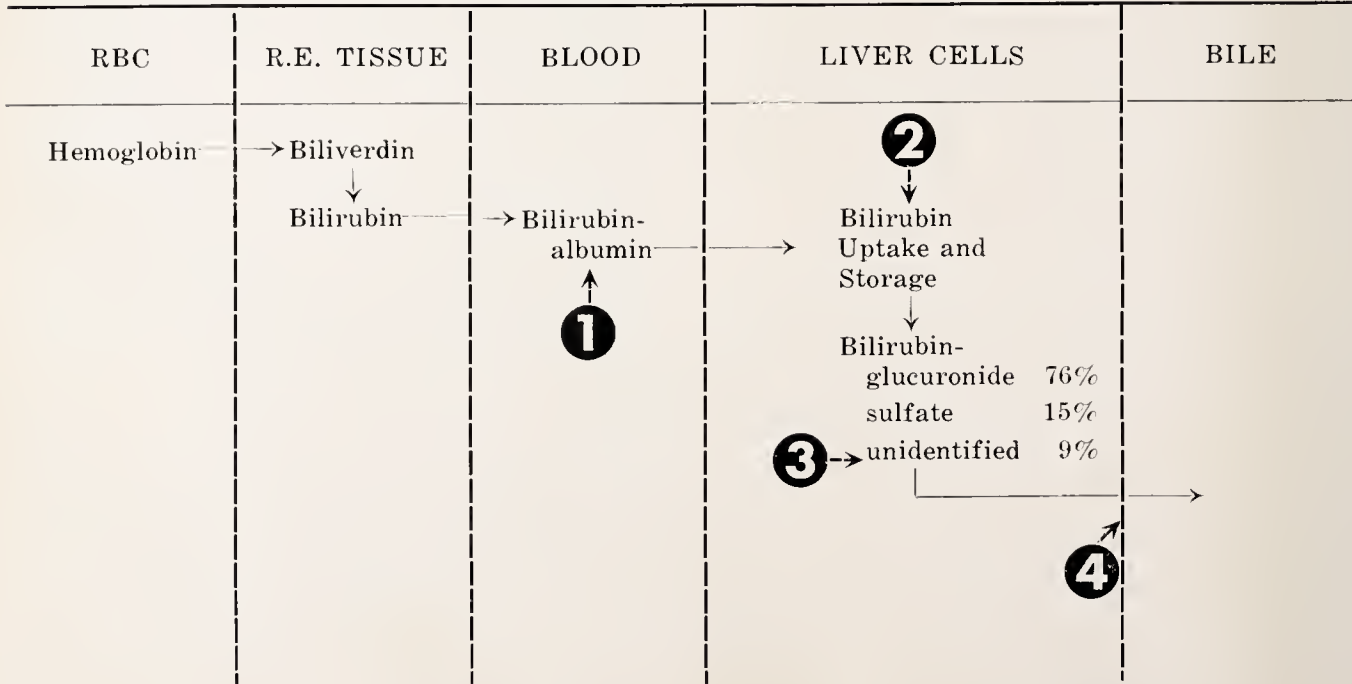
First, let us review the metabolic pathway of bilirubin formation and excretion. In Figure 1 at the top are shown body tissue compartments which are separated by the vertical dashed lines. Hemoglobin, when released by the destruction of red blood cells, is rapidly converted into biliverdin in the reticuloendothelial tissue. Since normally biliverdin is not found in

*Presented at the Annual Meeting of the Arkansas Society of Internal Medicine, Little Rock, Arkansas, April 18, 1961.

**Assistant Professor of Medicine. From the Department of Medicine, University of Arkansas Medical Center, Little Rock, Arkansas.

FIGURE I

POTENTIAL SITES OF DEFECTS IN CONSTITUTIONAL JAUNDICE



the blood, the biliverdin is immediately converted to bilirubin while the pigment is still within the reticuloendothelial tissue. Bilirubin then finds its way into the blood stream for transport to the liver for excretion. Since bilirubin is not water soluble, there has to be some mechanism to maintain bilirubin in solution during its transport to the liver. Binding of bilirubin to albumin serves this purpose. Once the bilirubin albumin reaches the liver, the pigment must be absorbed by the parenchymal liver cells. Bilirubin apparently can be stored in the liver cells prior to conjugation.

For excretion of bilirubin by the liver, another process must take place to form a soluble product since very little protein is present in liver bile. In recent years it has been demonstrated that the liver cell conjugates bilirubin with other substances to form water-soluble molecules. Glucuronidation, the most important conjugation mechanism for bilirubin, is also utilized

by the liver to render other substances, such as certain steroids, metabolically inactive in preparation for excretion by the body. About 76 percent of the bilirubin in bile is found as bilirubin glucuronide, 15 percent as bilirubin sulfate, and 9 percent in the form of other unidentified conjugates (3). Of particular importance in the formation of bilirubin glucuronide is the enzyme glucuronyl transferase, an enzyme which is found in the microsomes of the parenchymal liver cells.

Once the bilirubin has been conjugated, it must then be excreted into the bile. It is believed that this excretion into bile is an active process which in some way is dependent upon the recently described microvilli of the liver cells lining the collecting bile spaces (4). It is now known that the unconjugated bilirubin, although carried in the serum attached to albumin, is the indirect form of bile pigment in the Van den Bergh serum bilirubin test. The conjugated pigment, chiefly bilirubin

FIGURE II

	JAUNDICE OF PREMATURE	CRIGLER- NAJJAR SYNDROME	GILBERT'S DISEASE	DUBIN- JOHNSON SYNDROME	CHRONIC IDIO- PATHIC JAUNDICE WITHOUT PIGMENT
HEREDITY		autosomal recessive	dominant, incomplete penetrance	? autosomal dominant	?
SYMPTOMS		mental, spasticity	vague- abdominal distress	weakness 50% n. and v. 34% abd. pain 77% diarrhea 13%	fatigue <i>no abd. pain</i>
SERUM BILIRUBIN	indirect			direct —60% indirect—40%	
LIVER SIZE	normal			slight enlargement—52% tenderness—36%	
BSP	normal			abnormal—70%	
CF, TT	normal			increased—35 to 40%	
ALKALINE PHOSPHATASE	normal			slightly increased—12%	
BILE IN URINE	0			+++	
LIVER DEFECT	glucuronyl transferase deficiency			black pigment	
G.B. SERIES	normal			no conc. in 84%	

glucuronide, is more soluble and therefore gives the direct reaction in the Van den Bergh test.

The potential sites of defects in bilirubin metabolism, which may result in constitutional forms of jaundice, are indicated in Figure 1 by the numbers shown within circles. It has been postulated that there might be a defect in the ability of blood to transport bilirubin to the liver—1. It also has been postulated that the parenchymal liver cells may not be able to absorb and store bilirubin—2. There is definite evidence that conjugation of bilirubin to glucuronide within liver cells can be defective—3. There is some evidence to suggest that there also can be a block to excretion of conjugated bilirubin from the liver cells into the bile ducts, possibly due to defects in the microvilli of the liver cells—4.

CLINICAL SYNDROMES WITH INDIRECT SERUM BILIRUBIN

At the present time the constitutional non-hemolytic forms of jaundice can be divided into 2 major groups: those with elevation of the indirect serum bilirubin, and those with elevation of both direct and indirect serum bilirubin. Those conditions with an elevated indirect serum bilirubin only will be discussed first. See Figure 2.

Jaundice of the Premature Infant. Although this condition is not abnormal in the usual disease sense, it is one of the expressions of physiological immaturity in the premature infant. Studies, such as those of Brown and associates (5) with guinea pigs and rats, have shown that the glucuronyl transferase enzyme system in the liver does not become fully developed until about the time of normal birth or several days thereafter. In the premature human infant, therefore, the elevation of the indirect serum bilirubin probably is a manifestation of the immature glucuronyl transferase conjugation system. With mild and usually only transient elevation of the serum bilirubin in this condition, there are no symptoms other than the jaundice, which is of the indirect type of pigment. In the unusual severe form of this disease with serum bilirubin levels of 20 mg. percent or more, exchange transfusions can be utilized to protect against brain damage.

The liver is not abnormally enlarged and the usual liver function tests are not different from those usually found in premature infants. Liver biopsy reveals an architecturally normal liver. This condition is self-limiting as the conjugating mechanism of the liver rapidly matures and the accumulated bilirubin in the tissues then is conjugated and excreted in the bile.

Crigler-Najjar Syndrome. In a small number of infants a permanent deficiency of the glucuronidation conjugating mechanism exists (7). This syndrome is manifested by marked elevation of the indirect serum bilirubin. There is evidence that this condition is inherited as an autosomal recessive trait (6). When the serum bilirubin exceeds 20 mg. percent, there often is brain damage with resultant mental deficiency, epilepsy and spasticity (7, 8). This brain damage is known as kernicterus. This brain damage is postulated to be due to inhibition of aerobic oxidation and uncoupling of phosphorylation in both brain and liver tissue by the indirect bilirubin. This inhibition may be due to competition of indirect bilirubin with protoporphyrin for the iron in formation of heme (9). The liver and liver function tests, other than the jaundice, are basically normal. In some instances bilirubinuria has been reported. There is no adequate form of therapy for this disease, and death within about 1 year is usual when the serum bilirubin level exceeds 20 mg. percent.

Gilbert's Disease. Gilbert's disease is a mild form of intermittent jaundice which is most often recognized in young adults (3). The serum bilirubin elevation is in the indirect bilirubin, which usually does not exceed 5 or 6 mg. percent. There is evidence that this condition is inherited as a dominant trait with incomplete penetrance (6). Some investigators believe that this condition is merely a mild form of the same defect seen in the Crigler-Najjar syndrome.

The clinical picture is one of intermittent mild jaundice which often is noted in association with upper respiratory infections or other unrelated diseases. Symptoms from Gilbert's disease are either totally absent or are very mild and vague with complaints such as abdominal dis-

tress. The liver is normal in size and, other than the jaundice, the usual liver function tests are normal. Occasionally a flocculation test may be abnormal. Gall bladder series are normal.

A deficiency in glucuronyl transferase has been demonstrated in some of these patients, especially when the serum bilirubin has exceeded 5 mg. percent (3, 10-12). However, other investigators have not been able to demonstrate a deficiency of glucuronidation in some of these patients (13, 14). Therefore it has been suggested by Arias (15) that there may be some patients in this group with either deficient bilirubin transport to the liver or with a defect in absorption and storage of bilirubin by the liver cells. See Figure 1.

Since the jaundice is mild and there are no other significant abnormalities of liver function, these patients do not require therapy and prognosis is excellent. It is important that the patient understand the nature of his condition so that the patient can live a normal life free of any restrictions.

CLINICAL SYNDROMES WITH BOTH DIRECT AND INDIRECT SERUM BILIRUBIN

In this group of conditions both the direct and indirect serum bilirubin are elevated, symptoms are more prominent and there are liver function test abnormalities. Bilirubin is commonly found in the urine. See Figure 2.

Dubin-Johnson Syndrome. This disease is an intermittent form of jaundice with serum bilirubin levels often ranging up to 10 mg. percent or more (16). There is evidence to suggest that this disease may be an autosomal dominant trait (6). The serum bilirubin contains an elevation of both direct and indirect bilirubin, with the direct pigment constituting about 60 percent of the total serum bilirubin. These patients commonly have symptoms of nausea and vomiting (34 percent), weakness (50 percent), diarrhea (13 percent) and abdominal pain (77 percent) (16). The abdominal pain may be severe at times and is located in the epigastrium or right upper quadrant of the abdomen. The liver is slightly enlarged in 52 percent of cases, and it may be tender in 36 percent of patients (16). The brom-sulphalein, cephalin flocculation, thymol turbidity and alkaline phosphatase tests, in the order

given, are frequently abnormal. Direct bilirubin is present in the urine. Gall bladder series usually show no concentration of opaque media in the gallbladder. The gallbladder is completely normal in most cases, but Dubin (16) reports that 10 percent of his series have had gallstones present. Wolf and associates (17), from their studies of 2 families with this disease, emphasize that with mild degrees of liver involvement with the pigment to be described, the bromsulphalein test and gall bladder series may often be normal. A similar study of 2 families by Mandema and associates (18) showed that bromsulphalein uptake by the liver was normal during the first phase of the test, with subsequent delay in uptake which suggested that bromsulphalein retention is the result of a delay in excretion. Bromsulphalein conjugation to amino acids (the excretion products) was normal.

In this condition the liver is grossly black, although otherwise normal. The black color is the result of accumulation of a lipofuscin-like pigment in the central portions of the liver lobules (16). There is no glucuronyl transferase deficiency in this disease. It has been postulated that this condition is a result of a physiologic block to excretion of the conjugated bilirubin, perhaps at the level of the microvilli of the cells which surround the collecting bile sinusoids. Although this condition is stated to be benign, perhaps prognosis should be somewhat guarded since there is reason to believe that some of these patients may eventually develop chronic renal damage from formation of bile thrombi in the kidneys. There is no known form of therapy.

CHRONIC IDIOPATHIC JAUNDICE WITHOUT PIGMENT IN THE LIVER.

A generally acceptable term for this syndrome is not currently available. There have been about 7 cases of this syndrome described in the literature (19-23). In general this syndrome is similar to the Dubin-Johnson syndrome with certain outstanding exceptions. The disease is thought to be familial. The outstanding differences in this syndrome, compared to the Dubin-Johnson syndrome, are: 1) absence of abdominal pain, 2) absence of pigmentation in the liver, and 3) presence of a normal gallbladder series. Little else

is known about this disease and its basic defect.

SUMMARY

The potential sites of defects in constitutional non-hemolytic forms of jaundice are: 1) transport of bilirubin by blood to the liver, 2) uptake and storage of bilirubin by the liver cells, 3) conjugation of bilirubin by the liver cells, and 4) excretion of conjugated pigment into the bile.

The currently recognized forms of constitutional non-hemolytic jaundice can be divided into 2 groups, according to the nature of the jaundice. The first group has only elevation of the indirect serum bilirubin and includes jaundice of the premature infant, Gilbert's Disease and the Crigler - Najjar Syndrome. Glucuronyl transferase deficiency seems to be the common deficiency to all syndromes in this group, although defective transport or uptake and storage of bilirubin by the liver also has been postulated in Gilbert's Disease. The Crigler-Najjar Syndrome may simply be a more severe form of Gilbert's Disease.

The second group of conditions has elevation of both the direct and indirect serum bilirubin with bilirubinuria. Symptoms referable to the gastrointestinal tract with liver function test abnormalities are present. The only known differences between the Dubin-Johnson Syndrome and the other condition included in this group are presence of abdominal pain, pigmentation of the liver and an abnormal gallbladder series in the first syndrome.

References

1. Arias, I. M. Recent advances in the metabolism of bilirubin and their clinical implications. *Med. Clin. North America* 44: 607, 1960.
2. Schiff, L., and Billing, B. H. Congenital defects in bilirubin metabolism as seen in the adult. *Gastroenterology* 37: 595, 1959.
3. Arias, I. M. Gilbert's disease. *Bull. New York Acad. Med.* 35: 450, 1959.
4. Schaffner, F., and Popper, H. Electron microscopic study of human cholestasis. *Proc. Soc. Exper. Biol. and Med.* 101: 777, 1959.
5. Brown, A. K., Zuelzer, W. W., and Burnett, H. H. Studies on the neonatal development of the glucuronide conjugating system. *J. Clin. Invest.* 37: 332, 1958.
6. McConnell, R. B. Heredity in gastroenterology: a review. *Gut* 1: 273, 1960.

7. Jervis, G. A. Constitutional nonhemolytic hyperbilirubinemia with findings resembling kernicterus. *A.M.A. Arch. Neurol. and Psych.* 81: 55, 1959.
8. Hugh-Jones, K., Slack, J., Simpson, K., Grossman, A., and Hsia, D. Y. Clinical course of hyperbilirubinemia in premature infants. A preliminary report. *New England J. Med.* 263: 1223, 1960.
9. Labbe, R. F., Zaske, M. R., and Aldrich, R. A. Bilirubin inhibition of heme biosynthesis. *Science* 129: 1741, 1959.
10. Vest, M. F., and Streiff, R. R. Studies on glucuronide formation in newborn infants and older children. Measurement of p-animophenol glucuronide levels in the serum after an oral dose of acetanilid. *A.M.A. J. Dis. Child.* 98: 688, 1959.
11. Arias, I. M., and London, I. M. Conversion of "indirect" to "direct" reacting bilirubin by human and rat liver in vitro and studies of a defect in bilirubin conjugation in constitutional hepatic dysfunction (Gilbert's disease). *Clin. Res. Proc.* 5: 213, 1957.
12. Childs, B., Sidbury, J. B., and Migeon, C. J. Glucuronic acid conjugation by patients with familial nonhemolytic jaundice and their relatives. *Pediatrics* 23: 903, 1959.
13. Foulk, W. T., Butt, H. R., Owen, C. A., Jr., Whitcomb, F. F., Jr., and Mason, H. L. Constitutional hepatic dysfunction (Gilbert's disease): its natural history and related syndromes. *Medicine* 38: 25, 1959.
14. Schmid, R., and Hammaker, L. Glucuronide formation in patients with constitutional hepatic dysfunction (Gilbert's disease). *New England J. Med.* 260: 1310, 1959.
15. Arias, I. M., and Johnson, L. Hepatic uptake-storage of indirect pigment probably precedes conjugation and excretion. *Clin. Res.* 7: 290, 1959.
16. Dubin, I. N. Chronic idiopathic jaundice. A review of fifty cases. *Am. J. Med.* 24: 268, 1958.
17. Wolf, R. L., Pizette, M., Richman, A., Dreiling, D. A., Jacobs, W., Fernandez, O., and Popper, H. Chronic idiopathic jaundice. A study of two afflicted families. *Am. J. Med.* 28: 32, 1960.
18. Mandema, E., de Fraiture, W. H., Nieweg, H. O., and Arends, A. Familial chronic idiopathic jaundice (Dubin-Sprinz disease), with a note on bromsulphalein metabolism in this disease. *Am. J. Med.* 28: 42, 1960.
19. Schiff, L., Billing, B. H., and Oikawa, Y. Familial non-hemolytic jaundice with conjugated bilirubin in the serum. A case study. *New England J. Med.* 260: 1315, 1959.

KERRISON JUNIPER, JR., M.D.

20. Summerskill, W. H. J., and Walshe, J. M. Benign recurrent intrahepatic "obstructive" jaundice. *Lancet* p. 686, Oct. 31, 1959.
21. Vest, M. F., Kaufmann, H. J., and Fritz, E. Chronic non-haemolytic jaundice with conjugated bilirubin in the serum and normal liver histology: a case study. *Arch. Dis. Child.* 35: 600, 1960.
22. Peck, O. C., Rey, D. F., and Snell, A. M. Familial jaundice with free and conjugated bilirubin in the serum and without liver pigmentation. *Gastroenterology* 39: 625, 1960.
23. Haverback, B. J., and Wirtschafter, S. K. Familial nonhemolytic jaundice with normal liver histology and conjugated bilirubin. *New England J. Med.* 262: 113, 1960.

WATCH FOR SOMETHING NEW —
ISSUE OF JANUARY, 1962!

What Is Your Diagnosis?



From Radiology Dept., University of Arkansas Medical Center.

FOR ANSWER SEE PAGE 318

Arkansas Public Health at a Glance

Hearing Screening in Arkansas Schools

It is the purpose of the school hearing screening program to locate individual children who need ear care and bring them to the attention of the appropriate professional person or agency in position to provide the right kind of help. This program has been under the direction of the Maternal and Child Health Division of the Arkansas State Board of Health for the past thirteen years and many children have received attention to their ears whose hearing could very well have been permanently impaired had there been no means of detecting these hearing problems.

The State Health Department under the guidance of a Committee from the Eye, Ear, Nose and Throat Section of Arkansas Medical Society established at the beginning of the program the desirable standards for screening and the criteria for referring for further medical examination. These standards and referral criteria have been reviewed periodically by the E.E.N.T. section since then. The portable puretone audiometer was selected as the device for screening. This device was chosen because of its simplicity and ease of operation as well as insuring a standardized test for each child. The sweep-check or discrete frequency method is used for screening purposes and the discrete-frequency threshold-acuity test is used for retesting the children who fail the sweep-check screening test.

The sweep-check screening test is presented as an individual test. To administer the test the attenuator of the audiometer is set at 20 decibels and the tester sweeps through the frequencies 250, 500, 1,000, 2,000, 4,000, and 8,000 cycles per second for each ear. The child indicates by raising his hand if he hears the tone as it is presented. In the school program there is a slight variation of the sweep-check test in that if a child does not respond to a tone at 20 decibels the attenuator dial is raised to 30 decibels and the tone is presented again, if he responds it is then lowered to 20 decibels and the tone is again presented. Any child who fails to re-

spond at two or more of the six frequencies in either or both ears at 20 decibels will be retested by the same method two to three weeks later. This allows time for colds or other temporary conditions affecting the hearing to clear up. If the child fails the screening retest, he is then given the discrete-frequency threshold-acuity test. This test is much more refined and the objective is to find the lowest intensity level of hearing acuity (threshold acuity) at the six different frequencies. The 1000 cycle frequency is chosen as a starting point. The tone is set at an intensity level high enough for the child to hear, gradually lowered until the sound can be no longer heard, then increased until sound is audible again. This "threshold seeking maneuver" is repeated until a uniform response is obtained. Each of the six frequencies are tested on each ear and the results are plotted on an audiogram. Children who fail, in either ear, to hear the tones at 20 decibels at two or more frequencies are referred by means of a letter to the parents for a more complete examination by a physician. It is requested that a report be returned to the school that this examination has been made and with recommendations from the physician in regard to the educational needs of the child.

The hearing screening program is a school, community, and health department project and is a part of the total school health program. Schools desiring this program agree to furnish the quietest room available to do the testing. Parent-teacher or civic groups are trained to do the screening by a hearing consultant from the State Health Department or by the local public health nurse. The pure-tone audiometer and other materials are loaned, without cost, by the health department. The audiograms and referrals, in most instances, are done by the hearing consultant or public health nurse with the assistance of the screening group. Since this program is a part of the total school health program teachers are urged to include teaching

FEATURES

units on care of the ears during the time the program is in progress.

In setting up and organizing the program in the school special emphasis is placed upon the fact that this program is a screening test and is by no means complete and final. Due to the lack of a fully adequate testing room and other existing conditions a few children who fail the test are found upon later audiological examination to be without a hearing difficulty. However, every precaution is taken to avoid unnecessary referrals to the physician. He may find conditions that need attention even though the hearing loss was temporary.

The following table is a report of hearing tests which have been given under the direction of the State Health Department. This table does not include the school year 1960-61 because the report for this year is

incomplete. Many schools have failed to submit reports and other schools have purchased their own audiometers and do not report to a central agency.

HEARING PROGRAM FOR 1948-49 THROUGH 1959-60

<i>Year</i>	<i>Screened</i>	<i>Referred for Medical Attention</i>
1948-49	9,244	246
1949-50	19,027	674
1950-51	25,328	732
1951-52	17,821	665
1952-53	40,982	1,046
1953-54	32,559	772
1954-55	54,560	1,325
1955-56	54,545	1,308
1956-57	62,696	1,808
1957-58	64,096	1,629
1958-59	58,880	1,247
1959-60	50,756	889

Editorial:

Is Hemochromatosis a Variant of Cirrhosis?

ALFRED KAHN, JR., M.D.

There are many facets to the problem of iron metabolism. Hemochromatosis has puzzled physicians for many years. Recently, this subject has been excellently reviewed by MacDonald (Arch. Int. Med. Vol. 107, p. 606, 1961), whose material is summarized below. Credit is given Dutoin for reporting the triad characterizing this disease: diabetes, enlarged liver, and pigmented skin.

MacDonald poses this question: is hemochromatosis a different disease from hemosiderosis? He has examined a number of arguments which tend to separate these two conditions.

Firstly, in previous reviews it is said that hemochromatosis has a different morphological appearance from hemosiderosis. It is pointed out that although the hemosiderosis of pernicious anemia and hemolytic anemia do differ in appearance from hemochromatosis. The hemosiderosis of dietary iron ingestion looks like hemochromatosis with large amounts of iron in the liver rather than in the spleen, kidney, and bone marrow.

Some authorities have stated that hemochromatosis was an inborn error of iron metabolism. Except for Sheldon's review, MacDonald states that among 707 reported cases there are only 7 families with 2 members having hemochromatosis. He further reports that the 20 percent of the relatives of cases of hemochromatosis who have elevated serum iron could be related to similar diet rather than heredity. In any event, elevated serum iron does not seem to cause cirrhotic changes in the liver. Females do not seem to have hemochromatosis as often as males, and although this could be the result of heredity, menstrual blood loss could also explain it.

Iron absorption has been said to be regulated by a mucosal block in the intestine which permitted only the absorption of the physiological needs of the body; further iron absorption was blocked. This

idea appears to be controverted by the fact that increasing doses of iron cause increasing absorption without apparent blockage at a physiological level, as in children poisoned by excessive iron ingestion. In anemic people more iron is absorbed than needed and the excess is deposited in the body. Animals can store excess iron if it is excessive in their diets, and in fact certain diets seem to promote this as in protein deficiencies, etc. The iron absorption in hemochromatosis has been scrutinized and actually seems to be normal at times and this argues against an inherited, constant defect.

Many authors have argued as to whether or not iron causes tissue damage. Current evidence indicates it does not. Excessive iron has been given to laboratory animals for long periods without being able to induce cirrhosis. Iron does not accelerate cirrhosis in laboratory animals who are on a deficient diet. MacDonald discounts so-called transfusion hemochromatosis; he does not accept the case reports as being adequately documented to prove this point. In so-called transfusion hemochromatosis there was more iron in the tissues than could be accounted for by the transfusions, indicating at least some other mechanism of excessive iron intake.

The tissue avidity for iron in hemochromatosis is increased according to MacDonald. It has been found that blood iron levels were constant despite elevated iron in tissues. The iron granules in hemochromatosis tend to grow in size suggesting a failure of the tissue to release iron. Tissues with a high metabolic rate accumulate iron faster than those with a slower rate. Iron given to patients with hemochromatosis goes to red blood cells to the extent of only 20 percent, whereas in normal patients 70 percent of intravenously iron therapy went to the red blood cells.

MacDonald views idiopathic hemochromatosis as a variant of portal cirrhosis,

FEATURES

although in a few cases it might develop from co-existing hepatic and hematological disease. Hemochromatosis is more often associated with portal cirrhosis than other types of cirrhosis. Furthermore, there is a similarity of iron findings in portal cirrhosis and hemochromatosis. The fat and "alcoholic" hyalin of portal cirrhosis are often seen in hemochromatosis. Nutritional disease is present in many cases of hemochromatosis and alcoholism is present in 29 percent to 85 percent of cases. Cirrhosis, as it develops, seems to bind

iron, and in experimental animals deficient diets given to produce cirrhosis tend to cause excess iron deposition. Lastly, pancreatic fibrosis is often seen in portal cirrhosis as well as in hemochromatosis.

This timely, provocative article by MacDonald is worthy of study by all practitioners. From time to time authors assemble a group of signs into a syndrome or single disease, which further critical study refutes. This may be the case in hemochromatosis.

**WATCH FOR SOMETHING NEW —
ISSUE OF JANUARY, 1962!**

MEDICINE IN THE NEWS

Doctor Diplomats

Five physicians from Tulsa, Oklahoma, members of the First Presbyterian Church of Tulsa, are giving up their practices for six-week periods to serve voluntarily at the Miraj Medical Center in Miraj, India.

Dr. C. S. Lewis, one of these five Tulsa physicians, recently reported to the AMA on the progress of the project labeled "Doctors in Asia."

The first of the group of volunteer physicians flew to Miraj in mid-August. He will return at the end of September and the next doctor will make the trip. In all, the five physicians will donate a total of 30 weeks to the program. The project is endorsed by the Tulsa County Medical Society. Funds for medical equipment, transportation and other expenses were raised through church and public contributions.

Other groups of American physicians are also becoming interested in the possibility of initiating a similar venture in their own communities. For example, several doctors met with Doctor Lewis during his AMA visit to discuss the feasibility of adopting an overseas program which would provide medical care to another area of the world equally in need of such assistance.

Still another example of American physicians demonstrating their interest and willingness to serve in foreign mission fields on a temporary basis is shown by the large number of doctors who have written to the AMA Department of International Health in the last few months to inquire about such service. This new Department administers a program approved last June by the AMA House of Delegates whereby members of the AMA may volunteer for service in the foreign mission fields on a temporary basis when emergencies arise. Cooperating with AMA in this program are missionary agencies representing every denomination sponsoring American medical missionaries.

Physicians interested in volunteering for such service are asked to write directly to the AMA Department of International

Health, 535 N. Dearborn Street, Chicago 10, Illinois.

Hot Springs Plays Host to Urologists

Over 300 urologists attended the 40th annual meeting of the South Central Section of the American Urological Association at the Arlington Hotel in Hot Springs. The urologists represented seven states and the Republic of Mexico.

The lives of many people who suffer heavy losses of blood from serious injuries, major surgical operations and women having complications in labor cannot be saved by the use of artificial kidneys, Dr. Reed M. Nesbit of Ann Arbor, Michigan said. Dr. Nesbit, who is professor of surgery, Urological Division of the University of Michigan Medical School, addressed the meeting. Continuing, Dr. Nesbit said that heavy losses of blood result in the kidneys not functioning and when they stop functioning uremic poisoning sets in and 50 to 60 percent mortality occurs, because the poisons of the body eliminated by the kidneys accumulate and cause death. This is known as renal failure, he said.

He said that the artificial kidney is a device with which we pump the blood from the body through the artificial kidney and this artificial kidney extracts from the blood the poisons which cause death if not eliminated. The surgeon also told his listeners the methods which have been developed for preventing this condition called renal failure which promise to be successful. "We now use a sugar called mannitol which is not used by the body, but which is eliminated by the kidney along with water and keeps the kidney functioning when it otherwise might stop."

Dr. Nesbit touched on the subject of the widespread use of tetrachloride as a cleaning agent in homes, saying that it is often responsible for kidney failure and should not be used by housewives in dry cleaning.

It is a deadly poison should a child get hold of it. Dr. Nesbit discussed the case of the would-be suicide who drank tetrachloride, taking 50 to 100 times the lethal dose and survived when Dr. Nesbit gave her an injection of the recently discovered mannitol sugar. "This prevented her from developing kidney or liver failure and is the first case on record anywhere in the

world that a life was saved in this fashion," he said. "Mannitol sugar will continue to play a major part in the prevention of renal failure which refers to non-functioning of the kidneys with death resulting."

Dr. Hjalmer E. Carlson, Kansas City, Mo., told the group "more infants and children are afflicted with kidney disease than people realize and it's imperative that parents recognize the importance of early diagnoses." He pointed out that new life-saving operations for disease of the urinary tract in infants and children were at hand and described them. "Some diseases of the kidneys in children are associated with various birth conditions of a congenital nature," he said, "and in other cases the nervous system is involved and the diseased kidney is the result and will cause the death of the child if not treated. The response to the operation is often dramatic and in many instances the livers of critically ill children were saved by the operation described." Dr. Carlson said that great strides are being made in urologic surgery in infants and children and that these operations will continue to save lives while further progress is being made and better operations devised.

Dr. Simon A. Beisler, New York, president of the American Urological Association, told the group the American Hospital Association was attempting to take over the whole medical profession. He said the trouble with the AHA was that it is composed primarily of lay administrators who have succeeded in ingratiating themselves with the boards of trustees. "The medical profession should have a better liaison with the boards of trustees in hospitals throughout the country," he said, "as most of them are composed of businessmen who don't know what is going on." Lay administrators tell them just what they want to tell, he said, adding doctors have a better viewpoint and hospital trustees should balance the lay administrators and doctors.

Touching on the subject of hospital costs, Dr. Beisler pointed out that there are legitimate reasons for increased cost of hospitalization, particularly operating costs. "The operating room alone costs \$600 to open the door before you put the patient in and start to work on him—fre-

quently it costs from \$1,000 to \$2,500. One prime reason for these costs is lay administrative running of hospitals which we feel should be materially cut down," he suggested that doctors start working on this angle.

Turning to the subject of the Blue Cross-Blue Shield, he told his listeners that Blue Cross had been dominated, controlled and run by a council of the AHA, but that there is a great hope that in a recent change in the head of the National Blue Cross that it will be run in a more realistic manner. If Blue Cross-Blue Shield makes any favorable steps, the other insurance companies are apt to follow as it is a leader in the field.

Two Little Rock urologists, Dr. Merlin Kilbury, Jr. and Dr. William M. Christeson, presented a joint paper on the subject of children and adults whose bladders have been paralyzed by some abnormal condition in the spinal cord such as a birth defect, polio infection, tuberculosis, or injury.

The two doctors who have performed 35 bladder substitutions in the past seven years, have developed new bladders from the loop of an intestine known as the ileal, which to date have been highly successful. The original bladder is left in with the exception of cases involving cancer of the bladder and the cervix.

Drs. Kilbury, Jr. and Christeson in conclusion said that the paralytic condition of the spine is not curable and that the victims of such paralysis would always have to live with the substituted bladder.

Kidney stones came in for a panel discussion moderated by Dr. Charles A. Hulse of San Antonio, Texas. Panelists included Dr. Rubin Flocks, Iowa City, Iowa; Dr. Harold A. O'Brien, Dallas, Texas; and Dr. Donald Albers, Oklahoma City, Oklahoma. The doctors devoted some time to discussing stones caused by the tumors of the tiny parathyroid glands in the neck which are sometimes of a cancerous nature. They said that, with the aid of new tests these tumors in the last few years are being discovered more readily and found to be the causes of stones in more cases than heretofore realized. They said there should be parathyroid control of the calcium and phosphorous balance in the body to avoid the growth of these tumors. It was stated

that kidney stones occur in people of all ages and while many stones are of a recurring nature, many can be prevented with early analysis and detection of the small tumors in the parathyroid neck glands.

Dr. Russell Scott, Jr. of Houston, Texas was moderator of a panel on "Diagnosis and Treatment of Renal Vascular Hypertension" at the closing session of the meeting. Other panelists included Dr. Creighton Hardin of Kansas City, Kan., Dr. Edward Dennis and Dr. George Morris of Houston, Texas; Dr. Bruce H. Stewart of Ann Arbor, Michigan; and Dr. Lawrence J. McCormack of Cleveland, Ohio. Dr. Scott stated that 10 million Americans are affected by hypertension, a major cause of death. Some causes are correctable and some are not. He said patients in the latter category must take drugs in an attempt to control blood pressure.

The panelists discussed in detail the kidney disease that causes high blood pressure. They said it can be cured by an operation. It was pointed out that when a kidney does not get enough blood, it releases a substance which causes high blood pressure. This can be corrected in two ways:

An operation can be performed on a blood vessel which goes into the kidney. If reconstruction is impossible, part or all of the kidney not receiving the amount of blood necessary, can be removed and this will cure hypertension it was explained.

Dr. Raul Lopez Engelking of Mexico City was named president-elect of the South Central Section of the American Urological Association during the closing business session. Dr. Henry Bucktel, Denver, Colo., assumed presidential duties succeeding Dr. William L. Valk of Kansas City, Kan.

Dr. A. Keller Doss, Fort Worth, Texas, was re-elected as Secretary-Treasurer.

The group voted to hold its next convention in Mexico City.

Lab Tests for Viruses Are Halted

State Health Officer Dr. J. T. Herron said that laboratory tests for viruses can no longer be made by the U. S. Public Health Service. Such tests have been conducted by the diagnostic laboratory in Atlanta, but it has become overloaded with

test requests, Dr. Herron said. This leaves Arkansas—one of the few states without its own diagnostic laboratory—out in the cold insofar as rapid identification of a virus type is concerned.

Dr. Herron said that there are about 65 types of virus that cause illness and that it is vital to both the doctor and patients that the "bug" be quickly identified so that proper treatment can be started.

Dr. Herron said he has been trying to get a diagnostic laboratory for this state for "seven or eight years," but without success.

Arkansas Lawyer Addresses National Association of Claimant's Attorneys, Boston, Massachusetts, 1961

Mr. Sidney S. McMath, an Arkansas lawyer, in a recent address to the National Association of Claimant's Attorneys stated that he endorsed the policy of being extremely reluctant to take a malpractice case. One should approach these cases with a great deal of circumspection for two reasons, Mr. McMath said. One, because the term, "malpractice" itself, has a very bad connotation. When one thinks of "malpractice," he has visions of abortion or some other unlawful act that carries with it a prison sentence or perhaps disbarment from the medical profession. Mr. McMath's second reason for approaching these cases with reluctance is that it mars the cooperation between the medical profession and the legal profession presenting claims in the courts.

Mr. McMath summarized his address by stating that if one is sure that he has a client who is injured and that the injury is due to the negligence of the doctor, and that he is entitled to redress, the lawyer should take the case and make every effort to settle it with the insurance carrier. If it cannot be settled then the lawyer's duty to his client requires that the lawyer file suit and prosecute same with all vigor.

McAuley Neuropsychiatric Institute Of St. Mary's Hospital

McAuley Neuropsychiatric Institute is a separate department within the administrative structure of St. Mary's Hospital, San Francisco. It is an active member of the community clinics of the California State Department of Mental Hygiene.

This psychiatric service was instituted in 1954 as a neuropsychiatric center to provide outpatient psychiatric services to all types of patients with special emphasis on treatment of children and family groups. Initial grants from the National Institutes of Mental Health in 1954-55 assisted in establishing this service.

The Medical Director is Michael T. Khlentzos, M.D. He is certified by the American Board of Neurology and Psychiatry in Psychiatry and in Child Psychiatry. He heads the professional staff and is responsible for the total professional work and standards of the Institute. The staff is made up of selected psychiatrists, psychologists, psychiatric nurses, social workers and technicians. The Institute's services are primarily for acute short term treatment. Long term cases are accepted for evaluation and diagnosis only.

Within the limits of its space and staff time, McAuley Institute accepts for study and treatment any child, adolescent or adult. The Institute gives primary consideration to residents of San Francisco and the Bay Area of all races and creeds; however, referrals come from all of the Western States.

The 32,000 square feet of this new structure has 50 inpatient beds (25 children and adolescents, 25 adults) and a complete outpatient department. Eight thousand square feet is allotted for outpatient and 24,000 square feet have been assigned to inpatient areas.

The inpatient facilities are operated according to "open ward" philosophy. Patients are admitted on the same basis as to the general hospital. The newly admitted patient is brought into the patient group as soon as possible so as to influence other incoming patients to conform to the behavior pattern of the nursing unit. The environment and activities are intended to create a relaxed, enjoyable atmosphere. This includes permitting patients to sleep in the morning and to retire at night at the approximate time they would at home. Meals are served in the combined day and dining room in attractive surroundings with full complement of silverware and dishes.

The Adult Service and Children-Adolescent Services each have separate outpatient care facilities. These include of-

fices, conference rooms, interview rooms, therapy and activity areas, group therapy rooms, office space for psychiatrists, psychologists, social workers, administrative and clerical staff. A professional library is also provided.

A Protest from Katanga Doctors

A message which was an appeal "to International Medical Conscience" arrived at Brussels. It was brought by a Belgian, wounded in a battle of Elisabethville and delegated by the Katanga doctors.

This document, which carried eight signatures, was an indictment. Its authors speak against the methods of the UNO, which they denounce and which constitute, they say, a determination not to recognize the humanitarian mission of the Belgian doctors who operate in this part of Africa.

"During various international Congresses including that of Paris in 1959, you made a point of defending the principle of the neutrality of medicine in time of trouble, in time of war, and you obtained the unanimity of the congressists of all countries of this idea which is a direct follow-up of medical ethics.

The medical corps of the ex-Belgian Congo has always recognized and applied this principle just as all doctors serving in Africa because every vocation and every medical formation is normally impregnated with it; they have devoted themselves at the bedside of anybody regardless of situation, tribe, political or religious opinions, in often precarious conditions, in small rural compounds and in the heart of the bush:

In this country the UNO has never wanted to recognize this medical attitude. More than that, it has ridiculed, bullied and expelled doctors, even those who in spite of the troubles and dangers had decided to continue their humanitarian mission: in too many regions which have thus been deprived of medical help, the UNO has never wanted or dared to send its own medical personnel. Even worse, at Luena it was a direct accomplice in the assassination of Doctor P. Mottoule in his hospital.

Thus eighty years of patient medical work have been nullified by an interna-

tional force which calls itself civilized.

This is why the doctors still practicing in this sorely tried country raise a violent protest and launch an anguished appeal to the medical conscience of the world:

—to put an end to the bad will of the UNO so that they will be allowed to bring help to all men irrespective of race, ethnic or political belonging, without being at the vexatious mercy of the so-called international 'peace' force;

—to stop this renewed misery, hunger and all too frequent mourning which is doubtless only registered in terms of statistics by those whose sense of humanity varies according to the sense of their opportunism;

—to ensure that the shame of the UNO does not continue to cover ineluctably those countries who participate in its mission.

On this day, we, the doctors serving in Elisabethville, attest on our honour that the mercenaries of the UNO fire upon Katangese ambulances wounding their crews who wear Red Cross uniform: the UNO ambulances, on the other hand do not bring the most elementary help to any civilians; that three hospitals in the town have been transformed into offensive bases by the UNO troops although they were occupied by bedridden patients, from the roofs and gardens, the UNO troops machine-gun military and civilian personnel. One of these hospitals is that which has been abusively called the Red Cross Hospital of the UNO, whose soldiers are responsible for numerous wounded civilians."

(Signatures)

The American College of Physicians Has Regional Meeting

The Arkansas-Oklahoma Regional Meeting of The American College of Physicians met at Hot Springs recently. About 100 specialists in internal medicine from Oklahoma and Arkansas attended this meeting. Features of the meeting were the following:

Governor's Welcome—John N. Compton, M.D., F.A.C.P. Governor for Arkansas.

An Assessment of the Value of Long-term Anticoagulant Therapy Following

Myocardial Infarction—Harold R. Hipp, M.D., F.A.C.P.

Primary Endocardial Fibroelastosis: Case Report—Harry F. Singleton, M.D.

Diagnosis and Treatment of Strokes from Carotid Artery Disease—Thomas M. Fletcher, M.D.

Recent Advances in Immunology as Related to Rheumatic Diseases—George J. Friou, M.D., F.A.C.P.

A Comparison of the Effects of Hydrocortisone Administration on Normal Tissues of the Rat—R. H. Bottomley, M.D. and Leonard P. Eliel, M.D., F.A.C.P.

Multiple Myeloma—Robert C. Lawson, M.D., F.A.C.P.

Pyridoxine-responsive Anemia—Sylvia Bottomley, M.D.

Vaccinia Gangrenosa—Jerome S. Levy, M.D., F.A.C.P.

Congestive Failure: Pathophysiology and Management: Thomas M. Durant, M.D., F.A.C.P., Treasurer, American College of Physicians, Philadelphia, Pennsylvania.

Chemotherapy of Leukemia—S. William Ross, M.D.

Renal Papillary Necrosis Associated with Prolonged Phenacetine Ingestion: A Case Report—Robert A. Jordan, M.D., F.A.C.P.

Electrolytes—The Common Denominator in Hypertension?—Francis J. Haddy, M.D., F.A.C.P.

Use of Triparanol (Mer/29) in the Management of Cushing's Syndrome and Other Forms of Hyperadrenalism—James C. Melby, M.D.

The Internist's Role in Pyelonephritis—William Jacobs, M.D.

The Differential Diagnosis of Cryoproteins—John M. Kalbfleisch, M.D.

PANEL: Advances and Concepts of Hypertension—Diagnosis and Treatment James S. Taylor, M.D., F.A.C.P., Moderator

Loyal L. Conrad, M.D., F.A.C.P.

Galen P. Robbins, M.D.

Robert G. Tompkins, M.D.

Thomas M. Durant, M.D., F.A.C.P.

Film on External Cardiac Massage by Smith Kline & French Laboratories done at the Johns Hopkins Hospital.

The meeting was concluded by a social hour and a banquet.

Poison Control Center Newest Facility at Jefferson Hospital

One of the newest facilities in the Jefferson Hospital's emergency treatment program is a poison control center containing a list of all known poisons and their antidotes. The new center was a gift to the hospital from the Delta Sigma Lambda chapter of Alpha Phi Alpha fraternity, a medical organization in Pine Bluff. The facility, consisting of an indexed file and several books on both common and rare poisons will be used by the physicians of Pine Bluff and surrounding areas. It will be operated and controlled by the Jefferson County Medical Society. It will be operated as a referred service. It is one of 460 such facilities scattered throughout the nation.

The Month in Washington

Washington, D. C.—The American Medical Association and the federal government declared all-out war on medical quacks and charlatans who bilk the sick and gullible of hundreds of millions of dollars each year through useless gadgets, phony nostrums, fake reducing pills and the many other gimmicks of the medicine show trade.

The campaign was launched at the First National Congress on Medical Quackery, under joint sponsorship of the AMA and the U. S. Food and Drug Administration, at the Sheraton-Park Hotel in Washington.

Among the keynote speakers were two top officials in President John Kennedy's cabinet, Secretary of Health, Education and Welfare Abraham A. Ribicoff and Postmaster General J. Edward Day. Leonard W. Larson, M.D., president of the AMA, and Oliver Field, Director of the AMA Department of Investigation, spoke for organized medicine.

Others on the program included Herbert J. Miller, assistant U. S. attorney general in charge of the criminal division; George P. Larrick, commissioner of the FDA, and Paul Rand Dixon, chairman of the Federal Trade Commission.

Other speakers included representatives of the American Cancer Society, the Arthritis and Rheumatism Foundation, and the National Better Business Bureau.

C. Joseph Stetler, director of the Legal

and Socio-Economic Division of the AMA, presided at the meeting.

Many state and county medical societies from throughout the nation sent representatives to the Congress. They carried back to their societies plans for cooperation with enforcement agencies at the local level and for a step-up of public education on the subject in an accelerated campaign against quacks.

Highlights of the talks included:

—Larson: "We must educate the public thoroughly and effectively. We must wage psychological as well as scientific warfare. We must not only prove the worthlessness of quackery, but we also must establish confidence in sound medical and health care.

"Speaking for the American Medical Association and our 180,000 physician-members, I pledge our efforts to the final eradication of quackery and all its minions and satraps."

—Ribicoff: "The total cost of unnecessary or dangerous medications in this country probably exceeds \$1 billion each year. Much of this expense is to men, women, and children who dearly need this money for good medical care or for other necessities of life.

"But quackery's costs in dollars only introduces the story. In terms of false hopes raised, in terms of ugly delusions fostered, in terms of tinkering with human life itself, the cost cannot be measured. The quack flirts with disaster. He challenges the sixth Commandment: 'Thou shalt not kill.'"

—Larrick: "The most widespread and expensive type of quackery in the United States today is in the promotion of vitamin products, special dietary foods, and food supplements. Millions of consumers are being misled concerning their need for such products. Complicating this problem is a vast and growing 'folk-lore' or 'mythology' of nutrition which is being built up by pseudo-scientific literature in books, pamphlets, and periodicals. As a result, millions of people are attempting self-medication for imaginary and real illnesses with a multitude of more or less irrational food items. Food quackery today can only be compared to the patent medicine craze which reached its height in the last century. Especially disturbing

is the tendency shown by some big and hitherto respected food concerns to use quackery in their sales material."

—Dixon: "Properly drafted and administered, legislation giving the Federal Trade Commission power to issue temporary cease-and-desist orders would, while observing all the requirements of due process, make it possible to protect the public interest more adequately in many areas.

"Although in the case of food, drug, and cosmetic advertising, the Commission can . . . apply to district courts for temporary injunctions, it would be much more efficient for the Commission itself to issue temporary orders in those cases as well as in others."

—Day: "The peddling of fake medical cures is the most prominent fraudulent activity conducted through the U. S. mails today. This huge 'industry'—and it has grown to that extent—is so prevalent and so widespread that it taxes the manpower of the Postal Inspection Service to the utmost in trying to bring the perpetrators to justice.

"We are doing everything we can to make more of our inspectors available to work on cases of this nature, to the extent it will not jeopardize enforcement in other fields."

Dr. L. Henry Garland, American Cancer Society: "The charlatan is in business to make money and he does so by offering **hope**. He tends to be courteous, optimistic, easily understood by the laymen, and confident that cure can be obtained. His patient does not care that the method used is a secret one, that the testimonials are largely fraudulent, or that the 'doctor' may not even be licensed. All he knows is that he is being reassured and treated by someone who seems to be interested in him as a person.

"If it is granted that the causes of charlatanism are . . . diverse, it seems obvious that control must be equally diverse—composed of the difficult and slow triad—public education, professional education and continued research in cancer prevention."

—Dr. R. W. Lamont-Havers, Arthritis and Rheumatism Foundation: "That this is a large problem is indicated by the estimated 250 million dollars a year that arthritic victims spend upon unproven,

and misrepresented products in a vain attempt to obtain unrealizable relief from their suffering. Not all of these products are quackery in the sense of being useless. Some contain active ingredients—usually salicylates, or apparatus such as vibrators, but are promoted with such misrepresentation of effects that the arthritic fully expects results beyond the capabilities of the drug. Others are outright quackery and include such popular items as alfalfa tea, uranium pads, honey and vinegar, etc. Of particular concern are the widely advertised so-called 'clinics,' chiefly in Missouri and Florida."

—Field: "We would like to envision the time when we can cease to worry about the medical quack. But it's going to take an awful lot of doing. The Food and Drug Administration, the Post Office Department, the Federal Trade Commission and the Food and Drug groups of many states of the Union, cannot do the job alone. It takes a program which seeks to acquaint the public with the problem, and swings into action quickly when there is a threat to the community or to the nation at large. This takes the help of all interested people—consumer groups, educational groups, religious organizations, and, most of all, those responsible for the education of the American youth. . . . The emphasis should be on letting the public know, strengthening the laws where necessary, but, most of all, providing a means of distinguishing between the legitimate medical practitioner and the one who pretends to be one."

UNDERGRADUATE ORIGINS OF MEDICAL STUDENTS

A relatively small number of colleges and universities continue to supply the majority of students admitted to U. S. medical schools each year. Table 1 shows the 25 undergraduate institutions that supplied the largest numbers of entering first-year medical students in 1952, 1954, 1956, 1958, and 1960, and the number of students who came from each of these schools each year. Although some students obtained their premedical education at two or more institutions for purposes of this report each student has been assigned to only one school. If the student held a baccalaureate degree (or degrees), he was

FEATURES

credited to the school from which he received the degree (or the first such degree). If the student had no degree he was assigned to the college at which most of his premedical course work was taken.

TABLE 1
25 COLLEGES AND UNIVERSITIES
PRODUCING THE LARGEST NUMBER OF ENTERING FIRST-YEAR
MEDICAL STUDENTS (1952-1960 IN TWO-YEAR INTERVALS)

1952		1954		1956		1958		1960	
School	No. of Ent. Med. Stud.	School	No. of Ent. Med. Stud.	School	No. of Ent. Med. Stud.	School	No. of Ent. Med. Stud.	School	No. of Ent. Med. Stud.
*Harvard	169	Harvard	174	Harvard	162	Harvard	182	Harvard	164
*Michigan	155	Michigan	136	Illinois	151	Michigan	164	Michigan	145
*Columbia	121	Illinois	105	Michigan	145	Illinois	121	Illinois	135
*Emory	98	Columbia	96	Columbia	145	Columbia	120	Columbia	131
*Indiana	96	Cornell	93	Wisconsin	122	Princeton	106	Princeton	120
*N.Y.U.	96	Yale	92	Cornell	107	Yale	101	Cornell	96
*Minnesota	96	Indiana	90	Yale	94	Penn.	98	Yale	96
*Illinois	95	Ohio State	90	Texas	91	Notre Dame	94	Wisconsin	93
*Yale	87	Cal. S.F.	90	Princeton	87	Cornell	94	Indiana	91
*Stanford	86	Minnesota	90	Cal. S.F.	87	Cal. S.F.	92	Dartmouth	91
*Princeton	85	Penn.	90	Minnesota	87	Wisconsin	87	Texas	89
*Penn.	83	Texas	84	Indiana	80	Dartmouth	84	Penn.	86
Pittsburgh	83	Wisconsin	79	Emory	78	Texas	83	Cal. S.F.	84
*Cal. S.F.	83	Emory	78	N.Y.U.	76	Cal. L.A.	82	Minnesota	84
*Wisconsin	82	Pittsburgh	78	Dartmouth	76	Stanford	81	Duke	83
*Texas	82	Princeton	76	Penn.	75	Emory	81	Stanford	81
Alabama	73	N.Y.U.	72	Stanford	74	Indiana	79	Ohio State	78
*Cornell	73	Stanford	70	Iowa	73	Minnesota	77	Cal. L.A.	73
Cal. L.A.	73	Alabama	70	Ohio State	72	Ohio State	76	Tulane	69
Kansas	71	Tulane	66	Cal. L.A.	71	Wayne	74	Wayne	69
Iowa	65	Dartmouth	65	Tennessee	68	N. Carolina	66	Emory	68
La. State	63	Duke	63	N. Carolina	64	Tulane	64	Iowa	63
Vanderbilt	62	Kansas	62	Notre Dame	62	Pittsburgh	62	Kansas	62
*Ohio State	61	N. Carolina	61	La. State	61	N.Y.U.	61	N.Y.U.	61
Duke	60	Holy Cross	59	Alabama	59	Duke	61	Notre Dame	56
Top 25 Schools									
Total	2,198		2,129		2,267		2,290		2,268
All Schools									
Total	7,381		7,424		7,835		7,925		8,075
Percent From Top 25 Schools									
	30%		29%		29%		29%		28%

Seventeen schools were among the top 25 "suppliers" of medical students in all five of the years included in this study. (These 17 schools are asterisked in the first column of Table 1.) In these five years they produced more than one fifth (22 per cent) of all entering first-year medical students. In this consistently high group, 9 are privately supported and 8 are publicly

supported schools. A regional breakdown places 7 of these schools in the northeast, 6 in the north central, and 2 each in the southern and western sections of the country.

Table 1 also shows the total number of entering first-year medical students each year, and the proportion of the entire entering freshman class supplied by the top 25 undergraduate schools. Although the top 25 schools comprise only about 3 per cent

*Among top 25 schools in all five years. Submitted by the Division of Basic Research of the AAMC, 2530 Ridge Avenue, Evanston, Illinois.

of all undergraduate institutions that supply one or more medical students in a given year, this group typically provides almost 30 per cent of the entering freshman class for that year.

Table 2 shows the number of colleges and universities that have provided 75 per cent and 90 per cent respectively of all entering first-year medical students in each even numbered year since 1952. This table also shows the total number of undergraduate schools that supplied one or more students each year, and the proportion of these schools from which 75 per cent and 90 per cent of the entering first-year medical school class was drawn.

TABLE 2
NUMBER AND PER CENT OF PREMEDICAL SCHOOLS* PROVIDING 75% AND 90% OF ENTERING FIRST-YEAR CLASSES (1952-1960 in Two-year Intervals)

Year	Premed. Schools Supplying 75% of Entering Class		Premed. Schools Supplying 90% of Entering Class		Total No. of Premed. Schools
	N	Per Cent	N	Per Cent	
1952	163	23%	327	45%	723
1954	162	23	329	46	708
1956	165	23	329	46	723
1958	174	23	346	45	762
1960	178	23	349	45	772

*Colleges and universities supplying at least one first-year medical student.

Since 1954 there has been a gradual increase in the number of institutions providing one or more new medical students each year. However, in any given year the entire entering freshman class has come from fewer than 800 colleges and universities. Nine out of 10 entering first-year medical students typically come from fewer than half (45 per cent) of these "pre-medical" schools, and three-fourths of the freshman class comes from less than one-fourth (23 per cent) of these institutions.

Petroleum Distillate Linked to Disease

An internal medicine specialist discussed the possibility that certain petroleum distillates such as paint thinners and hair dyes may, in some cases, cause leukemia. Dr. David G. Hanlon, consultant in internal medicine and hematology at Mayo Clinic, said proof of this theory is lacking. "But we have been impressed," he added, "that a great number of patients with leukemia give a history of being ex-

posed to potent hydro-carbon preparations, such as petroleum distillates."

He listed some of the distillates, including paint thinners, paint solvents, hair dyes, and many other potent chemicals available on the market. Explaining that there is wide disagreement, even among physicians, that certain cases of leukemia and lymphomas are either caused or precipitated by certain environmental exposures, Dr. Hanlon went on to say, "But we're suspicious." He and others at Mayo Clinic are doing research on the matter. "It should be emphasized," he said that these cases of the blood disease "apparently only develop in the sensitive individual, who may be genetically predisposed." Dr. Hanlon was one of the speakers on the program of the 14th Annual Meeting of the Arkansas Academy of General Practice in Little Rock.

Medical Assistance for Aged Program Outlined

Eligibility for the new Medical Assistance for the Aged program must be established in each County Welfare office, where authorization will be made, Mrs. Margaret Deal, Director, Medical Care Services of the State Welfare Department explained at a meeting of the Greater Little Rock Area Section of the American Association of Hospital Accountants, held at the Saline Memorial Hospital. Mrs. Deal said the program applies to persons 65 years of age, or older, not eligible for welfare assistance in any other category. "Medical Assistance for the Aged is not a money grant," she said. "It is solely assistance to the aged for medical services only."

Under this program, hospitalization requires the establishment of the needs for medical services, Mrs. Deal explained. Maximum group original authorization for hospitalization is limited to five days with a maximum 10 days extension, during a 12-month period. In other welfare categories, original authorization may not exceed 10 days. Maximum is 30 days per year.

Persons eligible under the Medical Assistance for the Aged category, may receive out-patient clinic visits, dental care and physician office calls, in addition to hospitalization, Mrs. Deal said. Mrs. Deal

discussed the Medical Assistance for the Aged program with a group of 12 hospital accountants and administrators from Benton, Little Rock, Hot Springs, Malvern and Arkadelphia. She answered questions and told of the Welfare Department's policies for the new program and others.

Obituary

Death Takes Texarkana Physician

Dr. Benjamin Crabb Middleton, 78, of Texarkana who practiced medicine there for 49 years, died in a local hospital. He was born in Montgomery County, Arkansas. He was a member of the First Methodist Church and the Masonic Order. Honorary pallbearers were members of the Bowie-Miller Medical Societies and the Board of Stewards of the First Methodist Church.

PERSONAL AND NEWS ITEMS

American College of Surgeons Have Cap-and-Gown Exercises

Those receiving fellowship and the designation of "FACS" from the state of Arkansas at the 1961 Convocation of the American College of Surgeons are as follows:

HOT SPRINGS—James H. French.

LITTLE ROCK—Masauki Hara and Walter Selakovich.

WEST MEMPHIS—Herbert G. Lanford.

Searcy Physician Has Located At Cave City

The progressive community of Cave City has a new physician. Dr. and Mrs. Olen Bridges have moved into the city recently. For the past two years Dr. Bridges has worked with Dr. Porter Rodgers in Searcy. At present, the doctor's office is located in his home.

Dr. Robins Back from World Medical Conclave

Dr. R. B. Robins, Camden, has returned from South America where he attended

the annual assembly of the World Medical Association in Rio de Janeiro as one of four official representatives of the United States. This assembly was attended by physicians from 55 nations.

Dr. Robins in a plenary session of the convention had the United States delegation present a prospective group insurance disability program to be sponsored by the World Medical Association whereby a physician may purchase an insurance policy that will insure him a lifetime monthly income should he become disabled to work on account of illness or accident. He also presented his idea to the Council of the WMA which is its Board of Trustees. Dr. Robins' idea was endorsed and he will assist in the research in developing such a program world-wide. The next annual meeting will be held in New Delhi, India in November, 1962.

Dr. Robins states that these annual world meetings of physicians offer a splendid opportunity to promote good-will among nations of the earth.

Doctor Establishes Walking Blood Bank

Dr. Joel Mills, physician and surgeon operating the Marshall Hospital, is establishing a walking blood bank for the benefit of the people in the Marshall area. Dr. Mills explained that such a blood bank once set up, could be of great value to people. A file will be kept of everyone who goes to the hospital and has their blood typed. Then in case of serious illness, accident, or other types of illness necessitating a blood transfusion, a record of the patient's blood type would be on hand, and also the record of other persons with the same type blood. This enables the patient to receive blood immediately without delay of having to get their blood typed and secure someone with the same type blood.

Dr. Wyllie Opens Office For General Surgery

Dr. James J. Wyllie has opened an office at 204 Craft Street, (DeClerk Clinic) for the practice of general surgery in Pocahontas and the surrounding area. Dr. Wyllie is a native of Pocahontas and has had several years of successful surgical work. He has been studying highly advanced training as a specialist in surgery.

Medical Clinic Started at Hardy

For many years there has been a real need for a medical clinic in Hardy. Dr. J. S. Miller has been retired for many years, but because of the need for some care, many people still called on him in emergency. The County Nurse, Miss Betty Miller, filled in for him many times. Both left Hardy over a year ago, leaving the area without anyone to care for the ill. The closest doctor was 23 miles from Hardy, in Thayer, Missouri. Several have tried before to get a doctor or to get a clinic started with a doctor in attendance. Various clubs and individuals have had drives to raise money for a clinic.

The clinic had to be located in an area that was accessible to everyone, a location close to the people. Mr. Ralph E. Johnson, president of Woodland Hills and Hidden Valley Development Companies, provided the answer by giving some land right in the city of Hardy on Federal Highways 62 and 63 for the clinic.

Interested citizens gathered and formed a non-profit corporation to organize and build the clinic. Mr. H. A. Horn, retired salesman for a wholesale grocery chain, was elected president. Mr. Norman Taylor, ex-drug and hospital representative from a major drug house, was elected vice-president. Miss Willie Garner, secretary in a business office in Hardy, became secretary; and Miss Maude Buford of the Hardy House, a novelty and curio shop in Hardy, became the treasurer. Several other men are also on the board and have given their time, materials and equipment. Mr. Johnson, a board member, provided heavy equipment and surveyors to get the land ready to build on. Mr. Herman Lawrence, dug the trenches for the foundation. Mr. Leonard Holden, a member of the board and a local building contractor, is supervising the building. Mr. Marion Kilian, plumbing contractor, is working on the plumbing for the new clinic. Mr. Oscar Burrows, a retired electrical contractor from St. Louis, Mo., and Mr. Fred Bracken of Ark-Mo Power Company of Hardy, is responsible for the electrical planning and installations.

The members of the board examined every aspect in financing the clinic. The possibilities for government aid was explored but they found that government aid

was not available for the type of clinic that was needed. The board members decided to go ahead on their own. Our forefathers had no government aid to fall back on but yet they were able to build something good and lasting that has served everyone well. The board is making an appeal for those that have visited their area and hope to donate to the building fund. Any size donation will be appreciated. Send a check or money order, payable to the Sharp County Medical Clinic, Inc., c/o Miss Maude Buford, Hardy, Arkansas. This is a tax-deductible corporation.

Proceedings of Societies

Contributors to the American Medical Education Foundation from the State of Arkansas during August 1961:

Dr. Douglas Lowrey, Russellville	\$ 15.00
Dr. Harry E. Murry, Texarkana	25.00
Dr. Warren T. Mayfield, Winslow	5.00
	<hr/>
	\$ 45.00

Contributors to the American Medical Education Foundation from the State of Arkansas during September 1961:

George C. Burton, El Dorado	\$ 10.00
Joseph E. Cross, DeWitt	10.00
Austin Doren, Smackover	6.00
A. M. Grasse, Calico Rock	100.00
A. R. Hammon, Harrison	10.00
Major H. Harris, Newport	5.00
Alfred Kahn, Jr., Little Rock	10.00
Berry L. Moore, Sr., El Dorado	5.50
David M. Russell, Jasper	20.00
J. W. Russell, Smackover	5.00
Warren S. Riley, El Dorado	13.50
David Yocum, El Dorado	15.00
Boone County Woman's Auxiliary	5.00
	<hr/>
	\$215.00

District Medical Society Meeting Held at Camden

The District Medical Society held an interesting as well as enjoyable meeting at the Hotel Camden, Camden, Arkansas, inviting physicians and their wives to attend. The meeting began with a dinner and was concluded with the following program:

Remarks—Dr. William A. Snodgrass, Jr., President Arkansas Medical Society.

Remarks—Dr. Winston K. Shorey, Dean, University of Arkansas School of Medicine.

Address—The Honorable C. Joseph Stetler, Director, Legal and Socio-Economic Division, American Medical Association—Chicago.

Address—Congressman Oren Harris, Chairman, House Interstate and Foreign Commerce Committee.

Officers attending the meeting were: President, Dr. John Ruff, Magnolia; vice-president, Dr. William B. Ellis, Stephens; secretary, Dr. C. D. Cyphers, El Dorado; councillors, Dr. George Burton, El Dorado, and Dr. J. L. Dedman, Camden. The meeting was enjoyed by all.

Physician Speaks on Law To Medical Assistants

Dr. J. D. Ashley, Newport physician, spoke to the Jackson County Medical Assistant's Society at their meeting at the Razorback Grill. Dr. Ashley told the medical assistants the meaning and effects of the Kerr-Mills bill, which became effective in Arkansas September 15th.

Presiding at the meeting was Phyllis Walden, president of the county organization. Reports were given by chairmen of various committees, and delegates from the organization have highlights of the House of Delegates meeting held recently in Little Rock. Eight members and three guests attended the session.

Medical Assistants Hear

Dr. E. C. Gay, Sr.

The House of Delegates of the Arkansas State Medical Assistants Society met in Little Rock. The agenda for this state meeting was a devotional followed by a lecture on the different phases of plastic surgery by Dr. Ellery C. Gay, Sr. of Little Rock. Following the luncheon meeting the House of Delegates met for a general business session. Mrs. Johnnie Irish served as the official delegate for the Garland and Clark County Society of Medical Assistants. Mrs. Bernice Koonce is State Treasurer to the Arkansas State Society of Medical Assistants and she serves as an official member of the Board in the House of Delegates.

New Members . . .

A new member of the Pulaski County Medical Society is **Dr. Marion Jack Henry**. He is a native of Little Rock, Arkansas, and received his preliminary education at the University of Arkansas from which he received a B.S. degree. He was graduated from the University of Arkansas School of Medicine in 1957. He practiced at the University of Texas from 1958-1960, and at Baylor University from 1960-1961. Dr. Henry is a pediatrician with his office at 810 West Second Street, Little Rock.

The Pulaski County Medical Society announces that **Dr. William Theodore Knicker** has been added to its roster of members. A native of Sequin, Texas, he attended the University of Texas and received his M.D. degree from the University of Texas Medical College at Galveston in 1953. Dr. Knicker has been Assistant Professor of Pediatrics at the University of Arkansas Medical Center for two and one-half years.

Dr. James R. Weber is a new member of the Pulaski County Medical Society. He is a native of Lebanon, Nebraska, and received his preliminary education from the University of Nebraska at Lincoln, Nebraska, from which he received the degree of B.S.M. His M.D. degree was obtained from the University of Nebraska College of Medicine at Omaha in 1957. Dr. Weber practiced in the United States Air Force for three years. His office is located at 1000 West Main in Jacksonville and he is a general practitioner.

Dr. Henry B. White of Morrilton is a new member of the Conway County Medical Society. A native of Lake Charles, Louisiana, Dr. White received his preliminary education from Southwestern Louisiana Institute at Lafayette, Louisiana, from which he received a B.S. degree. His medical education was obtained at the University of Arkansas Medical School from which he graduated in 1960. Dr. White is a staff member at St. Anthony Hospital and his office is located at Highway 64 East, Morrilton, Arkansas. He is a general practitioner.

Woman's Auxiliary

Woman's Auxiliary to the Pulaski County Medical Society

The Woman's Auxiliary to the Pulaski County Medical Society met for a luncheon meeting at the Dr. Charles Minor Taylor Memorial. Mrs. M. J. Kilbury, Jr. presided, and the guest speaker was Mrs. Hershel Wilmoth, president of the Woman's Auxiliary to the Arkansas Medical Society. Other guests were Mrs. Frank Padberg, president-elect of the state auxiliary, and Dr. William A. Snodgrass, president of the Arkansas Medical Society.

Hostesses for the first luncheon were Mrs. A. D. Hall, chairman; Mrs. Ellery Gay, Sr., co-chairman; Mrs. Curtis Jones, Jr., Mrs. Melvin McCaskill and Mrs. Elbert H. Wilkes.

Officers serving for the 1961-62 year were Mrs. M. J. Kilbury, Jr., president; Mrs. Guy R. Farris, president-elect; Mrs. John McCollough Smith, 1st vice-president; Mrs. Harvey Shipp, 2nd vice-president; Mrs. Robert L. Henry, recording secretary; Mrs. Joe B. Scruggs, treasurer; Mrs. J. B. Cross, corresponding secretary; Mrs. E. Lloyd Wilbur, historian; Mrs. James Newbill, publicity secretary; and Mrs. William A. Snodgrass, parliamentarian.

Medical Auxiliary Hears Mrs. Taylor

The Independence County Medical Society and Auxiliary met for a dinner meeting at the Marvin Hotel in Batesville. After the meal, the doctors adjourned to the North Arkansas Clinic for a business meeting; the auxiliary met at the home of Mrs. Paul Gray for their program. Mrs. Gray was hostess for the event.

Mrs. Charles Taylor, auxiliary program chairman for September, presented a most interesting and informative talk about the Kerr-Mills Law and the controversial King Bill. She explained what medical assistance is now available to the public through the state welfare agency, saying that the welfare has been most cooperative, and that no destitute patients have wanted for medical care. She explained the Kerr-

Mills Law, stating that it is more or less an extension of welfare services, and administered by the state, according to the state's needs. On the other hand, the controversial King Bill would actually curtail certain benefits and would be administered by federal government. In essence, the King Bill would mean socialized medicine, a medical program completely controlled by the government, which would rule out freedom of choice for the patient. Tax-wise, the King Bill would bring on a steady climb of taxes for us and other generations.

After the discussion, a record by Ronald Reagan, entitled "Ronald Reagan Speaks Out Against Socialized Medicine" was played. The members were urged to write their Congressmen stating their views, and were reminded that letters are the one way the Congressmen can be aware of the thinking of their constituents.

"Speaker Hits 'Centralism'"

Speaking before the Woman's Auxiliary to the Arkansas Medical Society at Coachman's Inn, Little Rock, Mrs. Louise Bushnell of New York, a member of the National Association of Manufacturers staff, urged her audience to examine the competence of federal bureaucrats.

"The American people have every right to question the qualifications of the federal government to make decisions which affect the well-being of their communities," she said.

"If the federal government knows how to solve municipal problems, why doesn't it solve them for Washington, the city for which the federal government has complete responsibility?" she asked.

"If you read the newspapers of Washington, D.C., a city of nearly one million persons, you would be aware of the fact that the problems that the federal government proposes to solve for the entire nation are no nearer solution in Washington than they are anywhere else in our land."

Mrs. Bushnell, who is director of the NAM's Women's Department, pointed out that Washington, for example, proposes to help the states and cities control crime and juvenile delinquency.

"Yet the Washington newspapers report that Washington, the Federal City,

is in a wave of uncontrolled crime and juvenile delinquency," she said. "Washington proposes to straighten out the nation's school problems. From the Washington newspapers you learn that the Federal City has not solved its school problems and that parents are concerned with the scholastic backwardness of Washington children compared with the rest of the nation. Washington proposes to take over the housing and transportation problems of the nation's cities. The Washington newspapers report that public housing is in a variety of messes and that no agreement has been reached on how to solve the city's transportation difficulties. The Federal City's slums have been notorious for years.

"Should we turn over the responsibility for our lives and our welfare to government bureaus with a record like this?" she asked.

Mrs. Bushnell urged the medical auxiliary to fight centralism, the trend toward big centralized government. "We know that centralism is expense, we know it is inefficient, and we know that Americans do not want it," she said. "We must ally ourselves, individually, and by groups to combat centralism wherever it threatens to break through. And we must be prepared to roll it back and restore freedoms that we have already lost," she concluded.

Book Reviews

CURRENT THERAPY—1961, edited by Howard F. Conn, M.D., pp. 806, published by W. B. Saunders Company, Philadelphia and London, 1961.

This standard textbook of therapy edited by Dr. Conn has a well organized text written by outstanding authorities in their respective fields. This is an excellent book for the general physician and medical student. In 806 pages it could hardly be considered encyclopedic and, for that reason, is to be considered inadequate except as a general therapeutic guide—which is the author's intention. The style of the book is excellent. It contains no illustrations and references are not included with the various articles. It has a roster of drugs and some tables of normal values. This textbook is recommended as a worthwhile edition as a guide to therapy. AK

CURRENT SURGICAL MANAGEMENT II, a *Book of Alternative Viewpoints on Controversial Surgical Problems*, Editors John H. Mulholland, M.D., Editor-in-Chief, New York University

College of Medicine, Edwin H. Ellison, M.D., Marquette University School of Medicine, Stanley R. Friesen, M.D., University of Kansas Medical Center, illustrated, pp. 348, published by W. B. Saunders Company, Philadelphia and London, 1960.

This is the second in a series of texts which present two sides of certain controversial surgical subjects. A book of this type is bound to be of considerable interest to the reader provided he can find a discussion of the topic in which he is interested. The big problem in a book of this sort is that the number of topics discussed is rather limited; in this case there are 17 topics. The chapters include a discussion of duodenal ulcer, polyps of the colon, hiatus hernia, carcinoma of the pancreas, carcinoma of the breast, etc. The chapters are written by eminent authorities and, for the most part, are in easy discursive style. Although this book is well written and interesting, it is of limited value to most physicians. AK

OFFICE DIAGNOSIS, by Paul Williamson, M.D., illustrated, pp. 470, published by W. B. Saunders Company, Philadelphia and London, 1960.

This textbook can best be described as an attempt to reduce the art of diagnostic medicine to something the size of a handbook. The reviewer feels that it is impossible to condense this information into a practical small book. The result is a series of brief descriptions of diseases, most of which are inadequately described even though the salient features are in the text. This book has no nitch and should not have been published, in the reviewer's opinion. It might be well used on the writer's own teaching wards but is not worth disseminating as a text. AK

TUBERCULOSIS ABSTRACTS

Sponsored by
The Arkansas Tuberculosis Association

OBSERVATIONS ON EXCESS MORTALITY ASSOCIATED WITH EPIDEMIC INFLUENZA

Two epidemics of Asian influenza since 1957 have resulted in 86,000 excess deaths. High risk groups are those 65 years of age and over, persons with certain chronic diseases, and pregnant women. Immunization is suggested for these groups.

THEODORE C. EICKHOFF, M.D.; IDA L. SHERMAN, M.S., and ROBERT E. SERFLING, PH.D., *The Journal of The American Medical Association*, June 3, 1961.

One of the classic epidemiologic descriptions frequently applied to influenza is embodied in the phrase "high morbidity, low mortality." Such a description, however, tends to lose sight of the fact that mor-

FEATURES

bidity in epidemic influenza may be so high that even the relatively low associated mortality may itself reach grave proportions.

Two epidemics of Asian strain influenza have occurred in the United States since the identification of this antigenic variant in May, 1957. The first occurred in two distinct waves from September through December, 1957, and from January through March, 1958; a total of almost 40,000 excess deaths was recorded during the first wave and of 20,000 during the second wave. During the first three months of 1960 a second major epidemic occurred, resulting in approximately 27,000 excess deaths. A total of 86,000 deaths in excess of the expected number thus occurred in the United States as a result of Asian influenza epidemics in the three-year period.

It is important to determine in how many of the 86,000 excess deaths influenza was merely a terminal event in an already severely debilitated patient, and in how many influenza and its accompanying pneumonia may have killed a person in active, productive life, albeit in an older age group, or with definite but compensated chronic disease.

The best measure of the total impact of an epidemic is provided by the total excess mortality. The following table shows the estimated excess, and that the bulk of it was in deaths due to pneumonia-influenza and cardiovascular-renal causes :

Cause and Period	Expected	Observed	Excess
Oct.-Dec., 1957			
Total Deaths	408,320	447,620	39,300
Pneumonia-influenza	12,440	24,540	12,100
Cardiovascular-renal	221,360	240,060	18,700
All other	174,520	183,020	8,500
January-March, 1958			
Total Deaths	421,020	441,020	20,000
Pneumonia-influenza	16,740	22,740	6,000
Cardiovascular-renal	235,180	248,180	13,000
All other	169,100	170,100	1,000
January-March, 1960			
Total Deaths	439,100	465,800	26,700
Pneumonia-influenza	18,270	28,870	10,600

Cardiovascular-renal	246,350	258,550	12,200
All other	174,480	178,380	3,900

When excess mortality data are analyzed by age, it is apparent that the heaviest toll is paid by the population over 65 years. Although during the first epidemic period only slightly over one half of the excess deaths occurred in persons 65 years and older, this proportion increased in succeeding epidemics; in the 1960 epidemic, 80 per cent of the excess deaths occurred among individuals in this age group.

It need not seem paradoxical that an epidemic of influenza should cause a distinct wave of excess deaths said to be due to cardiovascular-renal disease, or to some condition other than influenza or pneumonia. These "epidemics" of chronic disease are because deaths in the United States, as well as in most other countries, are tabulated by "primary" cause, that is, the cause that initiated the train of circumstances which eventually resulted in death.

LIVES CUT SHORT

Analysis of the excess mortality data has suggested that most victims of an influenza epidemic are those who might have lived considerably longer had influenza not claimed them, rather than severely debilitated patients in whom influenza is simply the terminal event.

Excess influenza-associated deaths due to asthma, diseases of the respiratory system other than influenza and pneumonia, and pulmonary tuberculosis probably occur primarily in patients whose pulmonary function is significantly compromised. The lives of diabetics are jeopardized by influenza not only by their increased risk of bacterial superinfection and increased incidence of cardiovascular-renal disease, but also by the increased risk of acidosis and coma during an acute infection.

An increased risk of influenza death in association with certain conditions is better demonstrated by clinical studies than by analysis of reported mortality data. The association of rheumatic heart disease and influenza-associated death, particularly rheumatic mitral stenosis and fatal influenza-virus pneumonia, for example, is well documented in the literature.

A relationship between influenza-

associated deaths and pregnancy is a common clinical impression. Several studies carried out during the 1957 pandemic have indicated that pregnant women are definitely at greater risk of death from influenza than non-pregnant women of the same age group.

VACCINATION FOR HIGH-RISK GROUPS

There is a significant body of evidence that the lethal potential of epidemic influenza is still present. Rather than recurring in a mild form, as might have been anticipated as the over-all immunity of the population increased, the most recent outbreak in 1960 resulted in excess mortality which exceeded that of the second wave of the 1957-1958 epidemic and approached that of the first wave.

This analysis serves to underscore the fact that certain individuals are at increased risk of death from influenza. Three broad groups can be identified—persons over 65, persons with certain associated chronic diseases, and pregnant women. The chronic illnesses of significance include cardiovascular-renal disease, particularly rheumatic heart disease; chronic pulmonary disease, e.g., bronchial asthma and pulmonary tuberculosis; and metabolic diseases such as diabetes mellitus.

It would seem entirely reasonable to believe that the prevention of influenza in these high-risk groups would result in a corresponding reduction of excess influenza-associated mortality. Annual immunization of such high-risk groups against influenza might well be highly effective in reducing the disquieting toll of excess deaths periodically exacted by epidemic influenza.

Letters to the Editor

26 September, 1961

Mr. Paul C. Schaefer
Executive Secretary
Arkansas Medical Society
218 Kelley Building
Fort Smith, Arkansas
Dear Mr. Schaefer:

The retention of certain servicemen beyond their normal date of expiration of active duty tours is

essential in order that the augmentation of the Uniformed Services, called for by the President, can be attained. Implementation poses many problems. Among them is the valid identification of the extendees' dependents who will remain eligible for certain benefits while their sponsors remain on active duty.

The extension of tours of duty may result in some dependents being without a valid Identification Card for some time. The basis of identification of dependents is, as you know, the Uniformed Services Identification and Privilege Card (DD Form 1173). Each card carries an expiration date of eligibility. This date, in the case of dependents of noncareer personnel, is the same as the expected expiration date of the sponsor's tour of active duty.

In the past, the "expiration date" on the ID Card has been the governing factor in determining that eligibility still exists. Since the involuntary extension of the tours of duty of many servicemen is effective almost immediately, the probability exists that some still-eligible dependent wives and children may apply for civilian medical care to which they are still entitled. They may not, however, have in their possession the required proof of their eligibility.

No change is contemplated in the provision of our contract which states that claims may not be processed for payment until the dependents have proven their eligibility to receive care. Service personnel are being advised that it is their responsibility to take necessary action to "update" the evidence of dependents eligibility.

It is most probable, however, that some dependents will be in need of authorized medical care from civilian sources prior to the time this action has been completed. In such cases, the dependent has been instructed to explain the situation to the physician and hospital authorities. They have been advised to present, if available, some tangible evidence such as allotment checks, official orders, directives, or personal letters which state the pertinent facts to the physician or hospital to help support the dependent's claim of continued eligibility.

This office is not empowered to broaden the "good faith" aspect of our contract. The number of dependents temporarily "unidentified" who require medical benefits will not be large.

In view of the situation at hand, I would appreciate your assistance in encouraging physicians and hospitals to exercise patience and understanding during the next several months when their services are requested by dependents of these extendees.

I must emphasize, however, that no claims may be processed for payment unless the dependent has provided a valid DD Form 1173 or a statement of eligibility as required by our contract and as outlined in ODMC Letter No. 1-60.



STRAIN

Essential in moving external masses, but potentially dangerous in moving the bowels, since vascular accidents may be precipitated in heart patients by excessive straining at stool. For cardiac patients with constipation, Metamucil adds a soft, bland bulk to the bowel contents to stimulate normal peristalsis and also to hold water within stools to keep them soft and easy to pass. Thus Metamucil, with an adequate water intake, induces natural elimination with a minimum of straining. Metamucil also promotes regularity through "smooth-age" in all types of constipation.

brand of psyllium hydrophilic mucilloid

Metamucil®

Available as Metamucil powder or as the new lemon-flavored Instant Mix Metamucil

SEARLE

FEATURES

This information is being furnished to all contractors and to the editors of leading medical and hospital journals. We would appreciate it if you could publish a copy of this letter, or an extract of the information in the next copy of your Medical Society journal or any other news media which is circulated to your membership.

Sincerely,
W. D. Graham
Brigadier General, MC, USA
Executive Director

ANSWER TO WHAT'S YOUR DIAGNOSIS?

27-year-old white male with non-productive cough and weight loss.

ANSWER—Neurofibroma.

X-RAY FEATURES: Smoothly outlined soft tissue mass in the right upper chest causing smoothly scalloped erosion of the posterior portion of the third rib.

WATCH FOR SOMETHING NEW —
ISSUE OF JANUARY, 1962!

THE JOURNAL OF THE

Arkansas MEDICAL SOCIETY

January, 1962

Vol. 58 No. 8

FORT SMITH,

U.C. MEDICAL CENTER LIBRARY

JAN 25 1962

San Francisco, 22

86th ANNUAL SESSION
ARKANSAS MEDICAL SOCIETY

HOT SPRINGS

APRIL 29—MAY 2, 1962

a look
at the
literature



“an excellent drug
Based both
on laboratory studies and clinical
impressions, it [Cordran] appears to
be an excellent drug for the relief of
cutaneous inflammation, possibly
more effective than any steroid we
have hitherto used.”

—Rosenberg, A., Jr.: Clinical Evaluation of
Flurandrenolone, a New Steroid, in Der-
matological Practice, J. New Drugs, 1:118,
1961.

Description: Cordran cream and ointment
contain 0.5 mg. Cordran per Gm. Cordran™-N
cream and ointment contain 0.5 mg. Cordran
and 5 mg. neomycin sulfate per Gm.

Cordran™-N (flurandrenolone with neomycin sulfate, Lilly)

Product brochure available; write Eli Lilly and Company, Indianapolis 6, Indiana.
This is a reminder advertisement. For adequate information for use, please consult
manufacturer's literature.



240209

when urinary
tract
infections
present
a therapeutic
challenge...

CHLOROMYCETIN®

(chloramphenicol, Parke-Davis)

Often recurrent...often resistant to treatment, urinary tract infections are among the most frequent and troublesome types of infections seen in clinical practice.^{1,2} In such infections, successful therapy is usually dependent on identification and susceptibility testing of invading organisms, administration of appropriate antibacterial agents, and correction of obstruction or other underlying pathology.

Of these agents, one author reports: "Chloramphenicol still has the widest and most effective activity range against infections of the urinary tract. It is particularly useful against the coliform group, certain *Proteus* species, the micrococci and the enterococci."¹ CHLOROMYCETIN is of particular value in the management of urinary tract infections caused by *Escherichia coli* and *Aerobacter aerogenes*.³ In addition to these clinical findings, the wide antibacterial range of CHLOROMYCETIN continues to be confirmed by recent *in vitro* studies.⁴⁻⁶

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals® of 250 mg., in bottles of 16 and 100. See package insert for details of administration and dosage.

Warning: Serious and even fatal blood dyscrasias (aplastic anemia, hypoplastic anemia, thrombocytopenia, granulocytopenia) are known to occur after the administration of chloramphenicol. Blood dyscrasias have occurred after both short-term and prolonged therapy with this drug. Bearing in mind the possibility that such reactions may occur, chloramphenicol should be used only for serious infections caused by organisms which are susceptible to its antibacterial effects. Chloramphenicol should not be used when other less potentially dangerous agents will be effective, or in the treatment of trivial infections, such as colds, influenza, or viral infections of the throat, or as a prophylactic agent. **Precautions:** It is essential that adequate blood studies be made during treatment with the drug. While blood studies may detect early peripheral blood changes, such as leukopenia or granulocytopenia, before they become irreversible, such studies cannot be relied upon to detect bone marrow depression prior to development of aplastic anemia.

References: (1) Malone, E. J., Jr.: *Mil. Med.* 125:836, 1960. (2) Martin, W. J.; Nichols, D. R., & Cook, E. N.: *Proc. Staff Meet. Mayo Clin.* 34:187, 1959. (3) Ullman, A.: *Delaware M. J.* 52:97, 1960. (4) Petersdorf, R. G.; Hook, E. W.; Curtin, J. A., & Grossberg, S. E.: *Bull. Johns Hopkins Hosp.* 108:48, 1961. (5) Jolliff, C. R.; Engelhard, W. E.; Ohlsen, J. R.; Heidrick, P. J., & Cain, J. A.: *Antibiotics & Chemother.* 10: 694, 1960. (6) Liad, H. E.: *Am. J. Proctol.* 11:392, 1960.

PARKE-DAVIS

68961

PARKE-DAVIS & COMPANY, Detroit 32, Michigan



THE
JOURNAL OF THE

Arkansas

MEDICAL SOCIETY

Owned by

THE ARKANSAS MEDICAL SOCIETY

And Published Under Direction of the Council

ALFRED KAHN, JR., M.D., Editor

1300 West Sixth Street Little Rock, Arkansas

MR. PAUL C. SCHAEFER, Business Manager

218 Kelley Bldg. Fort Smith, Arkansas

LITTLE ROCK BUSINESS OFFICE

114 E. Second St. Little Rock, Arkansas

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY

WM. A. SNODGRASS, JR.,—President	Little Rock
H. KING WADE, JR., President-Elect	Hot Springs
M. E. BLANTON, First Vice-President	Jonesboro
CHARLES W. REID, Second Vice-President	Pine Bluff
L. E. DREWREY, Third Vice-President	Camden
H. ELVIN SHUFFIELD, Secretary	Little Rock
W. R. BROOKSHER, Secretary Emeritus	Fort Smith
BEN N. SALTZMAN, Treasurer	Mountain Home
C. LEVIS HYATT, Speaker, House of Delegates, Monticello	
J. P. PRICE, JR., Vice Speaker,	
House of Delegates	Monticello
MR. PAUL C. SCHAEFER, Executive Secretary,	
P. O. Box 1345	Fort Smith

COUNCILORS

First District	JOE VERSER	Harrisburg
	ELDON FAIRLEY	Osceola
Second District	HUGH R. EDWARDS	Searcy
	PAUL GRAY	Batesville
Third District	K. E. BEATON	Wynne
	FRED B. STONE	Stuttgart
Fourth District	H. W. THOMAS	Dermott
	T. E. TOWNSEND	Pine Bluff
Fifth District	J. L. DEDMAN	Camden
	GEORGE C. BURTON	El Dorado
Sixth District	JOHN P. WOOD	Mena
	KARLTON H. KEMP	Texarkana
Seventh District	MARTIN EISELE	Hot Springs
	J. W. KENNEDY	Arkadelphia
Eighth District	ROBERT D. JONES	Little Rock
	BILL DAVE STEWART	Little Rock
Ninth District	ROSS FOWLER	Harrison
	STANLEY APPLGATE	Springdale
Tenth District	L. A. WHITTAKER	Fort Smith
	C. C. LONG	Ozark

The Advertising policy of this JOURNAL is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

EXCLUSIVE PUBLICATION—Articles are accepted for publication on the condition that they are contributed solely to this JOURNAL.

COPYRIGHT 1961—By The JOURNAL of the Arkansas Medical Society.

NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to the membership.

SCIENTIFIC ARTICLES

The Problem of Staphylococcal Infections	319
<i>Margaret H. D. Smith, M.D.</i>	

The Place of Radical Cervical Dissection in the Treatment of Carcinoma of the Lip and in the Oral Cavity	322
<i>Oliver H. Beahrs, M.D.</i>	

The New Face of Chaplaincy	327
<i>James M. Conard</i>	

WHAT'S NEW

Pathology	330
<i>T. F. Dilday, Jr. M.D.</i>	

TEACHING SEMINAR

The Management of the Cervical Stump	331
<i>John B. Nettles, M.D.</i>	
<i>Willis E. Brown, M.D.</i>	

FEATURES

What Is Your Diagnosis?	334
Electrocardiogram of the Month	336
Public Health at a Glance	337
Editorial	339
International Relations and Medicine	339
<i>R. B. Robins, M.D.</i>	
Medicine in the News	341
Things to Come	345
Obituary	346
Personal and News Items	348
Proceedings of Societies	351
Women's Auxiliary	352
Book Reviews	352
Tuberculosis Abstracts	354

Notice on Form 3579-P to be sent to Arkansas Medical Society, 218 Kelley Building, Fort Smith, Arkansas. Published monthly under direction of the Council, Arkansas Medical Society Vol. 53, No. 8. Subscriptions \$3.00 a year. Single copies 50 cents. Entered as a second class matter, May 1, 1955, at the post office at Little Rock, Arkansas, under the Act of Congress of March, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 1, 1918. Second-class postage paid at Little Rock, Arkansas.

THE PROBLEM OF STAPHYLOCOCCAL INFECTIONS

Margaret H. D. Smith, M.D.*

*Presented at the annual meeting
of the Arkansas Medical Society
Little Rock, Arkansas
April 17-19, 1961*

STAPHYLOCOCCAL INFECTIONS have in recent years assumed an extra-ordinary importance for all practitioners of medicine, hospital nurses and hospital administrators.

Not that they have not always been important, they have, for the staphylococcus is a ubiquitous organism which in the human is an inhabitant of the skin, the upper respiratory passages and the vagina, and it is found in many animals too.

However, its invasiveness and pathogenicity vary from time to time. There was a period during the middle and latter parts of the nineteenth century when staphylococcal infections were epidemic in many parts of the world; then their relative importance decreased, only to become striking again recently. This is worth mentioning, because to mention it is to raise the question as to whether the current widespread use of antimicrobial agents has contributed in any way to the increased prevalence of staphylococcal infections. Maybe it has, but maybe it has not.

*From the Department of Pediatrics, Tulane University School of Medicine and the Charity Hospital of Louisiana at New Orleans.

At any rate the pattern of sensitivity of staphylococci to various antimicrobial agents has turned out to be a very useful tool in studying the epidemiology of staphylococcal infections. Another relatively recently developed laboratory tool useful to the epidemiologist has been staphylococcus type identification by means of sensitivity to certain bacterial viruses. And finally there is the well known old characteristic of coagulase production by certain strains, which is so frequently associated with virulence, that the two for practical purposes can be said to be synonymous, and that *Staphylococcus pyogenes* and be defined as a staphylococcus which produces a substance able to react with a factor found in citrated plasma to produce fibrin.

It is true that *Staphylococcus pyogenes* produces factors other than coagulase which may play a role in its virulence, but these factors, such as hemolysins and toxins, are poorly understood.

How do staphylococci spread in nature? The nose, throat, and skin of healthy individuals provide such satisfactory growth conditions for this organism that only rare individuals do not harbor

these organisms, which apparently rarely call forth any measurable immune response. Usually one individual harbors only one phage type at a time. Some individuals apparently, although healthy, seem to disperse staphylococci more readily than others. Particularly if they develop lesions, such as respiratory infections, boils, paronychia, do they become dispersers. Since hospital personnel are so frequently in contact with patients with staphylococcal infections, they themselves pick up the patients' strains of organism. Since the patients have usually been treated with one or many antimicrobial agents, so the physician and nurses pick up these antibiotic-resistant strains, and then, when conditions are right, disperse them further among hospital patients. Both hospital personnel and patients serve as foci for family and community outbreaks.

Some of you are familiar with the work of Wentworth in the Ohio Department of Health, who studied in 1955 an epidemic of staphylococcal infections centered around the newborn nursery of the hospital in a community of 30,000. Of 90 babies born in this hospital in a 25-day period, 23 developed pustular dermatitis before discharge from the hospital and 3 more later. By the end of 6 months three-fourths of the mothers and one-third of the fathers and siblings of the babies had been colonized by the hospital strain and many had developed staphylococcal lesions.

Pneumonia is one of the most serious clinical entities caused by the staphylococcus, other serious manifestations being empyema and septicemia—and, of course, these three can occur together; another serious clinical problem is staphylococcal meningitis, fortunately very rare.

Its onset, particularly in the newborn period, may not be typical of a respiratory infection. Lethargy and cyanosis are frequent early signs. Haggerty and Hendren, in their excellent paper on staphylococcal pneumonias of infants and children, refer to "clinical-radiologic dissociation", because sometimes, in the presence of clinical signs of pneumonia, the chest x-ray is clear; or, alternately, without evidence of respiratory involvement, a chest x-ray is obtained as part of the investigation of the child, and extensive pneumonic changes are found. Thus the initial diagnosis may be difficult at best, and the difficulty may be enhanced by the fact that the infant may have received assorted antimicrobial drugs at the very onset of his illness.

This "clinical-radiologic dissociation" and the difficulty of the initial clinical diagnosis are the first points which I wish to emphasize.

Another is the uselessness of the leucocyte count as a diagnostic aid, for the leucocyte count may vary from 4,000 to 40,000 at the onset of the illness.

Yet another feature of the disease is the frequent and sudden occurrence of "blow-outs" with empyema and sometimes pneumothorax. The pathogenesis of staphylococcal pneumonia is probably based on the occurrence of an abscess, started either by staphylococci which come down the respiratory tract, or by the hematogenous route. If the abscess causes necrosis of a small area of bronchial wall, with intermittent and plugging of the resulting hole by pus, air may be sucked into the abscess area during inspiration, and, unable to escape during expiration, a collection of air may result which appears as a "cyst," or "bleb" on x-ray. This may increase in size and rupture into the pleural cavity through a large opening or a small one. There, a similar intermittent partial blockage of the pleural gap may result in trapping of air in the pleural cavity. The bronchopleural fistula may be so large that on rare occasions the patient may succumb within minutes unless the diagnosis is made by an alert house officer and drainage instituted.

Thus the treatment of staphylococcal pneumonia includes (a) the use of appropriate antimicrobial drugs to get the infection under control and (b) the constant awareness of the possibility of pus or air or both appearing suddenly in the pleural space. Fortunately a simple type of drainage through a small catheter with underwater seal is adequate for the management of both of these emergencies.

On the other hand the question of antimicrobial drugs is far more difficult. In the case of small local staphylococcal lesions, such as an abscess, surgical drainage is usually adequate, but in the case of systemic infections such as pneumonia, antimicrobial drugs are life-saving, and here there is *no* satisfactory method of determining which drug to use except by performing sensitivity tests in the laboratory on the strain of organism isolated from the patient himself.

There is excellent, if not perfect, correlation between the sensitivity of the organism on the one hand, and the patient's clinical response, if the test is properly performed. On the other hand, the sensitivity of staphylococci varies widely from pa-

tient to patient, from hospital to hospital and from region to region. At the present we find the majority of our strains of staphylococcus to be sensitive to chloramphenicol and erythromycin, and these two drugs are used together at the beginning until laboratory reports of sensitivity are available, usually in 24 or at most 48 hours.

It is urgent that, in each area, one or two drugs such as vancomycin and staphcillin be kept in reserve for the treatment of disease due to strains of organism which are resistant to the more frequently used antimicrobial agents. If this is not done, we shall, within a few years, have no effective drugs left.

Control methods for outbreaks of staphylococcal infection in hospital newborn nurseries have been fairly well worked out and are, in essence, applicable on other wards as well. Shaffer, from Ohio State, suggest the following:

1. Culture all purulent lesions in patients.
2. Search for and culture purulent lesions in personnel.
3. Compare staph strains from different sources (with the help of the State Health Department laboratories, where necessary).

4. Nasal cultures from all personnel and infants.
5. Review nursery technique.
6. Remove infected infants and healthy adult carriers.
7. Bathe all infants with hexachlorophene.
8. Antibiotic prophylaxis.

The above measures, I would emphasize are for the control of outbreaks already started.

Prevention is by the time-honored older methods of cleanliness and so-called medical aseptic technique, namely hand washing between patients, wet mopping of floors, extremely careful handling of contaminated dressings and bed linen, isolation of infected patients in separate cubicles and rooms. In short, patients with staphylococcal infections should be handled as patients with scarlet fever were handled twenty years ago!

REFERENCES

- Hendren, W. H. III, and Haggerty, R. J.: Staphylococcal Pneumonia in Infancy and Childhood, analysis of seventy-five cases, *J. A. M. A.*, 168:6, 1958.
- Ravenholt, M. D., and LaVeck, G. D.: Staphylococcal disease: an Obstetric, Pediatric and Community Problem, *Am. J. Publ. Health*, 46:1287, 1956.
- Shaffer, T. E., Baldwin, J. N., and Wheeler, W. E.: Staphylococcal infections in nurseries, *advances in Pediatrics*, Vol. X, Year Book Publishers, Inc. 1958.
- Wentworth, quoted by Shaffer.

ABSTRACTS

Treatment of Intractable Heart Failure in the Presence of Complete A-V Heart Block by the Use of the Internal Cardiac Pacemaker: Report of Two Cases—O. F. Müller and S. Bellet

New Engl J Med—Vol. 265:768 (Oct. 19) 1961

Severe congestive heart failure in the presence of complete A-V heart block, refractory to all measures usually employed in therapy, was treated successfully in two patients by the use of the internal cardiac pacemaker. Connection to heart muscle was accomplished by electrode catheter in right ventricle. Cardiac output as measured by Fick's principle was raised by increasing the original ventricular rate of 20 to 30 to the average of 50 to 65 per minute. The clinical status improved remarkably. The method is considered a valuable adjuvant for treatment of desperately ill patients with intractable congestive heart failure in the presence of very slow heart rates.

Bowel Infection and Acute Appendicitis—M. E. White, M. D. Lord, and K. B. Rogers
Arch Dis Child—Vol. 36:394 (Aug.) 1961

This report seeks to correct the widely held belief that a clinical or bacteriological diagnosis of infective diarrhea excludes the presence or development of acute appendicitis. Appendices removed from 160 children with acute appendicitis were examined. The evidence collected in a children's hospital over a period of 10 years demonstrated that acute appendicitis may be precipitated by a bowel infection. Symptoms and signs suggestive of acute appendicitis demand operation, even though a bowel infection may be known to be present. It is considered that an appreciation of this possible dual pathology will help to prevent hospital crossinfection due to salmonellae and shigellae. Literature on the subject has been reviewed and discussed.

THE PLACE OF RADICAL CERVICAL DISSECTION IN THE TREATMENT OF CARCINOMA OF THE LIP AND IN THE ORAL CAVITY

Oliver H. Beahrs, M.D.*

*Read at the meeting of the Arkansas Medical Society,
Little Rock, Arkansas, April 17 to 19, 1961.*

RADICAL DISSECTION OF THE NODES of the neck usually is a part of the definitive treatment for carcinoma of the head and neck.¹ Sometimes it is done as a procedure separate from removal of the primary lesion; sometimes it is part of a combined procedure in which the regional lymphatic structures are dissected and the primary lesion is widely excised. Ideally, such a dissection should be en bloc, as in radical mastectomy, and should include the intermediary lymph vessels. An operation for carcinoma must be radical, and in the course of it, enough tissue must be removed to circumvent spread of the lesion. At the same time anatomic or physiologic defects that would be incompatible with life must not be inflicted. Possibly the best illustration of a complete operation for carcinoma is amputation of an extremity by which all tissue immediately involved in the process is sacrificed. In treatment of lesions of the head and neck, however, certain structures must be preserved if life is to be maintained; also, if the cosmetic deformity is too great, the patient cannot live with himself.

Almost all carcinomas of the head, lip, oral cavity, and larynx spread into the lymph nodes of the cervical region. Fortunately, these nodes usually are effective barriers against further spread for a long time. Distant metastasis is the exception; the primary lesions and their metastatic extensions become inoperable, therefore, only when extension and invasion into the head and neck are widespread.

Historical Aspects

Radical dissection of the nodes of the neck as part of the definitive treatment of malignant lesions about the head and neck was first advocated by George Crile, Sr.² Previously, many surgeons had reported the removal of cervical lymph nodes in the course of operations for carcinoma of the oral cavity, but none saw so clearly as he did the importance of removing completely the cervical lymphatics. Crile^{2,3} had the foresight to interpret accurately the data available to him and to present a planned procedure comparable to those attributed to Halsted and Miles which were designed to remove the regional lymph structures along with the primary lesion. He advocated combined procedures that removed the floor of the mouth and tongue in combination with dissection of structures of the neck. He proposed and practiced excision of the sternocleidomastoid and omohyoid muscles, the internal jugular vein, and all the areolar and lymphatic tissues of the neck. His operation, with certain modifications, is similar in every respect to the operations used most widely today.

Because of the high mortality rate and the problems involved with anesthesia, infection, and fistula formation, the method of treatment advocated by Crile gave way to treatment of the intra-oral malignant lesions by the radiologist, who could treat them without operation but whose results left much to be desired. In recent years Martin and co-workers⁴ and others⁵⁻⁸ have reapplied the principles outlined by Crile and have

*Section of Surgery, Mayo Clinic and Mayo Foundation
Rochester, Minnesota

met with more success in the surgical treatment of these lesions because of the availability of additional surgical aids, such as intratracheal anesthesia, antibiotic therapy, and blood transfusion.

Present Surgical Management

During this second era of surgical treatment a large degree of orderliness has evolved in the management of carcinoma about the head and neck. With this development the prognosis for patients with these lesions has improved. Early in this period the management of the primary and secondary lesions was considered separately, the cervical nodes being treated sometimes before and sometimes after the primary lesion. The primary lesion was treated by radiation, operation or a combination of the two methods. The metastatic lesion or lesions were treated by modified or radical dissection of structures of the neck or by interstitial or external radiation. Today the primary lesion and the metastatic lesions in the cervical region are considered as one.

Most primary lesions are removed by wide excision, such as hemiglossectomy when the lesion is on the tongue, and radical dissection of the nodes of the neck at the same time. In some instances, however, in the absence of clinically evident metastasis to lymph nodes, the neck is merely observed. For cancers elsewhere in the body the regional lymph structures are always removed in the primary treatment of the lesions. This has not been true for several reasons for cancer of the head and neck. Radical dissection of the nodes of the neck is technically a formidable procedure which, in the recent past, has been associated with a significant mortality rate, and this has led surgeons to observe the neck. The neck is an exposed area, and the cosmetic deformity, although not severe, is not easily covered and is obvious to patient, friends, and strangers. The incidence of cervical metastasis for some primary lesions is known to be relatively low (lip) and on this basis dissection of the neck may not be indicated. For other lesions, the incidence of metastatic lesions is great (for example, base of the tongue), so that dissection in the neck most frequently becomes part of the treatment of the primary lesion regardless of what is felt in the neck on clinical examination. The morbidity following dissection of the nodes of the neck is not great, but the sacrifice of the spinal accessory nerve does cause some incapacity to the patient and this fact must be consid-

ered when function of the shoulder is important to the patient's occupation or activities.

Regardless of these contraindications, dissection of the node-bearing structures of the neck must be considered most frequently, although not routinely, in the management of oral carcinoma if survival results are to be improved.

Reasons for, and Results of, Radical Cervical Dissection

The neck lends itself to careful physical examination, and on this basis it might be concluded that cervical dissection should be considered only when invasion of the lymph nodes is clinically evident. It must be acknowledged, however, that the error in clinical judgment is significant and that the patient, although informed, does not always seek medical advice early. Also, because the jugular lymph nodes closely approximate the carotid vessels, any metastatic lesion is much better removed in its earliest stage. In a series of neck dissections done for carcinoma of the tongue,⁹ positive lymph nodes were found at histologic examination in 25.3 per cent of cases in which the nodes were thought clinically not to be involved. When metastasis was considered clinically to have spread to the nodes, no carcinoma could be found in 17.5 per cent of specimens. The former figure is of significance in that a large number of patients with metastasis would not have received early treatment had the decision for dissection been based solely on the clinical impression that no metastatic lesions were present on physical examination.

In a recent review of 615 consecutive unilateral dissections in the neck¹⁰ the operative mortality rate was 1.5 per cent and the morbidity was low. The standard dissection¹¹ included sacrifice of the sternocleidomastoid, omohyoid, stylohyoid, and digastric muscles, the internal jugular vein, spinal accessory nerve, lower pole of the parotid gland, the submaxillary gland and the adjacent fascia, fat and nodes. The mid-line structures, such as the hemithyroid tissue and strap muscles, were not removed as suggested by Pressman¹². Carcinoma recurred in these structures in only three cases after the 615 dissections. The over-all recurrence rate of carcinoma in the neck has been approximately 27 per cent, and the fact that the rate is not lower can be accounted for by the following reasons: (1) extensive carcinoma in the neck at the time of neck dissection, (2) possible seeding of carcinoma at the time of operation, and

(3) inadequate dissection in the neck. Nevertheless, it is important to note that the 5-year survival rate was 40 per cent.

Carcinoma of the Tongue.—A review of a series of 168 cases of carcinoma of the tongue treated at the clinic disclosed that when cervical lymph nodes were thought clinically to be metastatically involved or were found to be so on histologic examination, the 5-year survival rate was only 17 per cent, but when there was no evidence of involvement, the 5-year survival rate was 60 per cent. These are over-all figures.

Eighty-four patients of the 157 traced patients had no operation on the lateral part of the neck; of these, 36 per cent were alive at the end of 5 years. No metastatically involved nodes were found in 32 of the 73 cases in which the neck was dissected; the 5-year survival rate in these 32 cases was 69 per cent. Metastatic involvement of the nodes was found in the remaining 41 cases in which the neck was dissected, and the survival rate was only 27 per cent.

As mentioned, the 5-year survival rate was 36 per cent for patients who did not undergo dissection of the neck, while it was 45 per cent for those who did. One of the reasons that this is true is that some patients in the former group had inoperable lesions that had to be treated by other means, whereas all patients who underwent dissection of the neck had operable lesions. The 5-year survival rate of 17 per cent among patients with clinical or histologic evidence of metastasis to nodes, only some of whom were treated by dissection of the neck, was lower than the survival rate of 27 per cent for patients whose metastatically involved nodes were found at dissection of the neck. The lower percentage in the former group can be explained, of course, by the fact that the group included some cases in which the lesion was inoperable and biopsy or dissection of the neck was not done. Nevertheless, the results of this study support the fact that dissection of the neck is of value in the treatment of a patient with carcinoma of the tongue.

The Place of Bilateral Dissection

For many years the presence of bilateral cervical metastatic lesions made the condition inoperable and, in the absence of other definitive therapeutic agents, incurable. Bilateral sacrifice of the internal jugular veins was thought by most surgeons and anatomists to be a fatal procedure. As a result, when Evans¹³ reviewed this subject in 1942,

he was able to find reports of only seven cases in which bilateral interruption of the internal jugular veins had been done by general surgeons. In these seven instances, three patients died after operation, three survived, and the fate of one was unknown.

More recently, many anatomic and surgical reports have shown that bilateral sacrifice of the internal jugular veins can be done safely without jeopardy to the patient^{4,14-16} and in fact does offer the patient a chance for cure. The clinical adequacy of the remaining venous network or the safety of the bilateral procedures may be evidenced by the increasing number of reported cases, with ensuing low mortality and morbidity rates. Gius and Grier,¹⁷ by employing venography in a study of the venous drainage from the head and neck, found that normally there is adequate collateral circulation to drain the head and neck after division of both internal jugular veins. The collateral circulation includes the external jugular veins, the collecting veins of the posterior cervical region, and the occipital, deep cervical, posterior jugular, vertebral, pharyngeal, esophageal and pterygoid plexuses. The most important of these collateral vessels is the vertebral plexus. Although the area of the total cross section of the vertebral veins has not been accurately measured, Batson¹⁸ stated that it appears to exceed that of the internal jugular veins.

Ligation of one or both internal jugular veins results in an abrupt increase in the pressure of the cerebrospinal fluid. Sugarbaker and Wiley,¹⁹ as well as others^{15, 16, 20, 21}, showed that the pressure returns to normal within hours and that the temporary increase is not serious.

Recently Barber and I²² reviewed 68 cases in which bilateral dissection of the neck was carried out from 1951 through 1958; in nine cases simultaneous dissection was done, and in 59 nonsimultaneous dissection was used. The most common sites of the primary lesion were the epiglottis, tongue, and larynx. Three deaths occurred after 127 operations, giving an operative mortality rate of 2.4 per cent. Complications were, for the most part, of minor significance and small in number.

Follow-up data were encouraging: Of the nine patients who had simultaneous bilateral dissection of the neck, four were alive 5 years after operation (one with local recurrence), one patient was alive and well 2 years, and another was alive with local recurrence in the neck 17 months after the opera-

tion. Two had died of their disease in the follow-up period and one had died in the immediate postoperative period. Of the 59 patients who underwent subsequent dissection of the second side of the neck, 20 were alive and well after an average follow-up period of 42 months, and two could not be traced. Thirty-five had died of their disease, after having lived an average of 18 months following the first dissection. Including both groups, 26 patients were alive (two with local recurrence in the neck) after an average follow-up period of 42.4 months following the initial procedure. The two patients who are untraced were alive with recurrence a short time after operation, when they were lost to follow-up. This gives a survival rate of 41 per cent after an average 3½-year follow-up.

A total of 39 patients were eligible for a 5-year follow-up. Of the 39 patients, 35 had nonsimultaneous dissections. Twelve of the 37 who were traced were alive, giving a 5-year survival rate of 32 per cent. As already noted, four patients who had simultaneous bilateral dissections survived 5 years.

The results of this study and of the other similar studies reported in the current literature support the fact that bilateral cervical metastasis from an intra-oral or laryngeal carcinoma is not a sign of inoperability. Not only can bilateral metastatic lesions be operated on when the individual lesions are locally operable, but bilateral radical dissection of the neck, whether simultaneous or done on separate occasions, can be accomplished with a low mortality rate, minimal morbidity, and a significantly high survival rate. Previously these patients all died of their disease.

The cyanosis of the face that frequently occurs immediately after the second dissection of the neck and for a few days thereafter always has disappeared, and symptoms of venous congestion have been absent. Although the pressure of the cerebrospinal fluid is increased for several hours immediately after ligation of the second internal jugular vein, no significant symptoms have been related to this fact. An occasional patient has a transitory headache after operation, and this also may be unrelated to the cerebrospinal-fluid pressure.

The only significant complication has been the development of orocutaneous fistulas in a few cases in which the primary lesion in the mouth or larynx was removed simultaneously with one or both of the dissections of the neck. Because of

multiple factors, these fistulas probably would have occurred with a single dissection, and they cannot be considered a contra-indication to bilateral dissection.

The cosmetic defect after bilateral dissection of the neck is not too severe and is a small price to pay if the disease can be eradicated. If both spinal accessory nerves are sacrificed, many patients have dysfunction of the shoulders, which causes some incapacity. This is usually not true when only one spinal accessory nerve has been sacrificed in a unilateral dissection.

Because of edema about the head and the operative site after simultaneous or nonsimultaneous bilateral dissections of the neck, a temporary tracheostoma almost always is established. This ensures an adequate airway, and pulmonary secretions can be easily aspirated. The tracheal tube is removed in 4 to 7 days.

The fact that 41 per cent of the patients were alive an average of 42 months after operation and that 32 per cent of those eligible for 5-year survival studies were alive support the concept that bilateral dissection of the neck is a definitive surgical procedure of real value, especially since metastatic lesions were found in 90 per cent of the surgical specimens.

Comment

The primary indication for radical dissection of the neck on the side of the lesion is the presence of known or clinically suspected metastatic lesions. It is indicated also in cases in which lesions in the neck are not suspected or thought not to be present clinically but in which the primary lesion is located laterally and is of a type known to be associated with a high incidence of metastatic lesions, such as carcinoma of the tongue or the extrinsic part of the larynx. When metastatic lesions are found clinically on both sides of the neck, bilateral radical dissection is advisable. If the lesions on both sides are in an advanced stage and if any delay in carrying out the operation might permit the condition on either side to become inoperable, then simultaneous dissection of the neck is done. Preferably, however, dissection on the side of the primary lesion is done at the time of removal of the primary tumor; and the opposite side is attacked surgically 3 or 4 weeks later. In the past, the second side of the neck has not been operated on prophylactically or in the absence of clinically suspicious-appearing metastatic lesions. However, such an operation may

be justified when the site of the primary lesion, such as the epiglottis, tongue or larynx, is known to be associated with a high incidence of bilateral metastasis.

Almost always the dissection in the neck should be considered as part of the definitive treatment of the primary lesion and not as a separate operation for an independent lesion.

REFERENCES

1. Beahrs, O. H.: Radical dissection of structures of the neck: How radical should it be? Preliminary report. J.A.M.A. 157:794-798 (Mar. 5) 1955.
2. Crile, George: Excision of cancer of the head and neck: With special reference to the plan of dissection based on one hundred and thirty-two operations. J.A.M.A. 47:1780-1785 (Dec. 1) 1906.
3. Crile, G. W.: On the surgical treatment of cancer of the head and neck: With a summary of one hundred and twenty-one operations performed upon one hundred and five patients. Tr. South. Surg. & Gynec. A. 18:108-118, 1905.
4. Martin, Hayes, Del Valle, Bernardo, Ehrlich, Harry, and Cahan, W. G.: Neck dissection. Cancer. 4:441-499 (May) 1951.
5. Copeland, M. M.: Evaluation of neck dissection associated with other radical procedures for the treatment of cancer in head and neck. Ann. Surg. 141:910-937 (June) 1955.
6. Kremen, A. J.: Results of surgical treatment of cancer of the tongue. Surgery. 39:49-53 (Jan.) 1956.
7. Slaughter, D. P., and Southwick, H. W.: *En bloc* resection of cancer of the mouth and cervical lymphatics with preservation of the mandible. Ann. Surg. 136:957-963 (Dec.) 1952.
8. Ward, G. E., and Hendrick, J. W.: Diagnosis and Treatment of Tumors of the Head and Neck not Including the Central Nervous System. Baltimore, Williams & Wilkins Company, 1950, pp. 211-270.
9. Beahrs, O. H., Devine, K. D., and Henson, S. W., Jr.: Treatment of carcinoma of the tongue: End-results in one hundred sixty-eight cases. A.M.A. Arch. Surg. 79:399-403 (Sept.) 1959.
10. Beahrs, O. H., and Barber, K. W., Jr.: The value of radical dissection of structures of the neck in the management of carcinoma of the lip, mouth and larynx. Unpublished data.
11. Beahrs, O. H., Gossel, J. D., and Hollinshead, W. H.: Technic and surgical anatomy of radical neck dissection. Am. J. Surg. 90:490-516 (Sept.) 1955.
12. Pressman, J. J.: Extended retrohyoid radical neck dissection for cancer of the oral cavity and neck. Surg., Gynec. & Obst. 100:329-344 (Mar.) 1955.
13. Evans, M. G.: Bilateral jugular ligations following bilateral suppurative mastoiditis. Ann. Otol. Rhin. & Laryng. 51:615-625 (Sept.) 1942.
14. Moore, Oliver, and Smith, Robert: A case of one-stage bilateral neck dissection with recovery. Cancer. 4:1337-1340 (Nov.) 1951.
15. Morfit, H. M.: Simultaneous bilateral radical neck dissection: Total ablation of both internal and external jugular venous systems at one sitting. Surgery. 31:216-225 (Feb.) 1952.
16. Perzik, S. L.: Simultaneous bilateral radical neck dissection with recovery: Report of two cases. Surgery. 31:297-305 (Feb.) 1952.
17. Gius, J. A., and Grier, D. H.: Venous adaptation following bilateral radical neck dissection with excision of the jugular veins. Surgery. 28:305-319 (Aug.) 1955.
18. Batson, O. V.: Anatomical problems concerned in the study of cerebral blood flow. Fed. Proc. 3:139-144 (Sept.) 1944.
19. Sugarbaker, E. D., and Wiley, H. M.: Intracranial-pressure studies incident to resection of the internal jugular veins. Cancer. 4:242-250 (Mar.) 1951.
20. Beahrs, O. H., and Jordan, G. L., Jr.: Bilateral radical cervical dissection for malignant lesions of the head and neck. Proc. Staff Meet., Mayo Clin. 27:449-454 (Nov. 5) 1952.
21. Royster, H. P.: The relation between internal jugular vein pressure and cerebrospinal fluid pressure in the operation of radical neck dissection. Ann. Surg. 137:826-831 (June) 1953.
22. Barber, K. W., Jr., and Beahrs, O. H.: Bilateral radical dissection of the neck: Surgical treatment for carcinoma of mouth and larynx. Arch. Surg. 83:388-393 (Sept.) 1961.

ABSTRACTS

Uric Acid Metabolism in Psoriasis—A. Z. Eisen and J. E. Seegmiller

J Clin Invest—Vol. 40:1486 (Aug. Pt. I) 1961

Hyperuricemia has been noted to occur in approximately 30% to 40% of patients with psoriasis. The present study was undertaken to determine whether the pattern of glycine-1-C¹⁴ incorporation into urinary uric acid in psoriasis resembles that seen in primary or in secondary gout. Nineteen of 38 patients with psoriasis were found to have an elevation of the serum uric acid. Patients with extensive involvement of the skin

tended to have a higher incidence of hyperuricemia. Five patients with psoriasis all showed a greater than normal incorporation of glycine into urinary uric acid. The pattern of incorporation of C¹⁴ into urinary uric acid tended to differ from that seen in control subjects and appeared to be intermediate between that shown by patients with primary gout and those with secondary gout. The specific activity of C¹⁴ in urinary uric acid reached a maximum on the third day after administration of the isotope in patients with psoriasis.

THE NEW FACE OF THE CHAPLAINCY

James M. Conard

*Hospital Chaplain, Arkansas State Hospital,
Little Rock, Arkansas*

RELIGION IS CONCERNED with the over-all meaning to life. Man's illness, like the crises of bereavement, birth, vocational choice, marriage, death, has drawn the attention of the Church. (The term "Church" will be used to denote the Christian Church and the Jewish Synagogue.) The Church has been involved with the illnesses of man many years prior to the establishment of a medical profession. As a matter of fact, the medical profession is an outgrowth from the priesthood. It sounds rather ridiculous to compare modern medical procedures with the ancient custom of anointing the sick with oil and taking him into the temple to lie upon the floor until he was well or died, but we must recall that both the medical profession and the ministry have evolved from rather crude beginnings. The Church's interest in those who are ill is indicated at every level of the Church's organization. The laymen of the church have borne a part of the responsibility of ministering to the sick. For example, in Geneva during the Reformation, much of the care of patients was in the hands of deaconesses. The Church has played a large part in the establishing of nursing orders and the creation of hospitals.

The Church's interest has arisen from its philosophy that man is a whole being wherein man is not divided into mind, body, soul, but is an integrated totality. The division, in the philosophy of the Church, lies not in the sick individual but in the area of responsibility: physician, nurse, minister. Splitting comes only in the breakdown of labor. The doctor or nurse or minister is equally responsible to the patient. Priority of duty is a result of the patient's need at any given time.

The minister has been interested in people's

illnesses, therefore, since the initiation of his profession. He has faithfully been present in life and death situations. There have been times in these situations when he could do nothing but stand and wait. At other times he has been quite helpful to the sufferer. One might speculate that many doctrines of the Church have come from the encounter with life and death situations. For example, the act of circumcision arose in the Jewish faith for the purpose of cleanliness, and is therefore a health as well as a religious symbol. In the Church, certainly, the sacrament of extreme unction arose within the context of the ministers' contact with the dying individual.

To say that the Church has always had an interest in the illnesses of man is meant in no way to imply that it has not made its mistakes. Certainly, the idea expressed by the friend of Job that all sickness was directly caused by "sins" is as mistaken as the idea that there is no "wrong" but only sickness. The Reformation prohibition against the shedding of blood set surgery back many years, and had it not been for the dedication of physicians who were willing to break theological dogma for the sake of the sick individual, that branch of medicine would still lag far behind. The idea of demon possession, and the condemnation of the religious community against individuals supposedly so possessed, added to the difficulty of the Salem witchhunt days of Colonial America.

However, the Church has attempted to profit from their mistakes. The growth of any group must of necessity be compared to the growth of the individual wherein there are phases of great insight and growth and times of apathy and regression.

The Church has attempted to provide spiritual resources for its constituents in their crises periods. The religious chaplain has been present in the armed services since the Revolutionary War. However, it was not until World War II that our country discovered the contribution that the trained religious minister could make to men in the armed services.

The Institutional Hospital ministry has certainly profited from insights gained from the military chaplaincy, but its primary growth as a profession came from within the community of suffering. In the 1920's two ministers, the victims of illness themselves, later became the fathers of the institutional/hospital ministry in the United States. Russell Dicks, a young theological student, was stricken with tuberculosis of the bone. He writes concerning the experience: "During that experience of severe suffering my religious faith was wrecked. I had the best surgical care in the world, good nursing, and dietary care, and I did not pay a hospital bill for I had no money, being taken care of by social service. The one thing I did not receive was pastoral care." (Carl J. Scherzer, *The Church and Healing*.) The other minister, Anton T. Boisen, became the participant in an acute emotional illness. He observed that his own illness was a disorganization of his perceptual world and that religion, which is that element which supposedly gives meaning to life, can be either the element for better integration or further disorganization. The two men found the helpfulness of religion through their own suffering. As a physician once remarked in regard to his own surgery, "It makes a difference which end of the knife you're on." Both of these men, with some difficulty, obtained positions in hospitals as chaplains. In the ensuing years they have engaged other ministers in clinical pastoral training in hospitals to teach from their own experiences and from the wisdom of the health team how religion may become a vital part in making an individual whole.

The hospital chaplain finds himself engaged in pastoral counseling relationships with patients who call for him and those whom physicians, nurses, and relatives ask him to call upon. He leads worship services, he deals with persons in bereavement situations. He must learn to cooperate with other staff members, being aware of his own unique contribution and the areas of responsibilities of other persons on the health team.

The chaplain is there to aid the person as he seeks the faith and confidence that comes from God. Therefore, he must be especially trained to deal sympathetically and understandingly with the sick.

In order to provide the type of training which the hospital minister requires four accrediting bodies have been organized to determine standards and provide training centers. These four accrediting bodies are: The Council for Clinical Training; The Southern Baptist Association for Clinical Pastoral Education; The Lutheran Advisory Board; The Institute for Pastoral Care. These four groups adhere to the standards for clinical pastoral education adopted by the National Conference on Clinical Pastoral Training adopted in 1952.

The standards of this body are listed below:

"I. DEFINITION OF CLINICAL PASTORAL EDUCATION:

Clinical pastoral education is an opportunity for a theological student or pastor to learn pastoral care through interpersonal relations in an appropriate center, such as a hospital, correctional institution, or other clinical situation, where an integrated program of theory and practice is individually supervised by a qualified chaplain-supervisor, with the collaboration of an interprofessional staff.

II. QUALIFICATIONS OF THE CHAPLAIN-SUPERVISOR:

1. Graduation from an accredited theological school upon the completion of a three-year graduate course beyond the bachelor's degree or its equivalent.
2. An adequate period of pastoral experience, with ordination and denominational approval.
3. At least one year full time of clinical pastoral education and in addition three months of supervised clinical teaching.
4. Professional competence including graduate studies, past experience, and demonstrated performance. Graduate degrees in appropriate fields with clinical orientation are recommended and may be evaluated as follows: Six months' credit toward clinical education may be given for appropriate doctor's degree. Three months' credit may be given for an appropriate master's degree.
5. Personal qualifications to be appraised by an accrediting committee in a face-to-face interview.

III. REQUIREMENTS FOR THE CLINICAL TRAINING CENTER:

1. A chaplaincy service which is well established and recognized as a functioning part of the center, with a chaplain accredited as a supervisor (see II).
2. A progressive institution, oriented toward therapy or rehabilitation, serving an adequate number of patients or inmates, accessible to the chaplain's program, maintaining an interprofessional staff available for continuous teaching of theological students.
 - (a) General appreciation within the institution of the role of a chaplain, recognition of theological students as functioning members of the chaplain's department, and adequate opportunity for them to work in significant and appropriate clinical tasks.
 - (b) An alert and cooperative administration and staff, who will be ready to assume responsibility for implementing the clinical program.
3. Maintenance should be provided for students in training, or such provisions as may be comparable to the

internship programs of other professional groups in the institution.

IV. MINIMUM ESSENTIALS OF CLINICAL PASTORAL EDUCATION:

1. A supervised practicum in interpersonal relations.
2. Writing of clinical notes for consultation with the chaplain-supervisor.
3. A continuing evaluation of the student's experience and growth to be offered during the training period.
4. Frequent association with an interprofessional staff who are genuinely interested and qualified to teach students.
5. Adequate provisions for group discussion, seminars, and other group experience for all students.
6. A continuing concern for an integration of psychological, ethical, and theological theory, with practical understanding of the dynamics of personality and facility in interpersonal relations.
7. A written evaluation of his experience to be made by the student to his chaplain-supervisor at the end of the training period.
8. A final summary evaluation of the student's work and capacities to be written at the end of the training period by the chaplain-supervisor, discussed with the student, and with his knowledge made available to the appropriate responsible parties.

V. MINIMUM PROGRAM RECOMMENDED FOR CLINICAL PASTORAL EDUCATION:

1. For the theological student who is preparing for the parish ministry:
 - (a) An introductory course in clinical pastoral care during the entire academic year, with one day per week at an accredited center and under the direction of an accredited chaplain-supervisor who is a functioning member of the staff of the center; and
 - (b) Clinical pastoral education for twelve weeks, full time.
2. For the student who is seeking a master's degree in pastoral care, at least six months' clinical pastoral education, full time.
3. For the advanced student preparing for the teaching of pastoral theology and pastoral care, an appropriate doctor's degree with at least nine months, full time, of clinical pastoral education, and in addition three months of supervised teaching of pastoral care.

VI. SPECIAL CONSIDERATIONS:

1. For pastors and other religious workers seeking additional training:
 - (a) Full time participation in clinical pastoral education for six to twelve weeks is recommended.
 - (b) Where this is not possible, participation in orientation programs at an accredited center is recommended.
2. For chaplains serving full time, at least twelve months' full time clinical pastoral education is recommended, six months of which are to be in the type of institution which he serves. Where this standard has not yet been attained, hospital administrators are encouraged

to release their chaplains periodically for the necessary training.

(Appendix, Wayne E. Oates, *Religious Factors in Mental Illness*)

Clinical Training in the State of Arkansas has a rather recent history. The first training program was begun in the Arkansas State Hospital in 1948 under the supervision of the hospital chaplain. Since that date a program of clinical training for ministers has been continuous in the Arkansas State Hospital. A program of clinical pastoral training was begun in 1957 at Arkansas Baptist Hospital with the employment of the Reverend Don Corley as Chaplain. That institution, too, has conducted a continuous program of training for ministers since that date.

The purpose of clinical pastoral training is to bring the ministers in face-to-face contact with persons, wherein he can learn more about their inner needs, their deeper motivations, and their aspirations. In the training program the minister learns from other personnel of the healing team. He learns to preach to people's needs. He learns how to effectively do individual and group counseling, and when and whom to refer to other professional specialists. In learning about other people, he learns also about himself. He recognizes his failures, and uses his mistakes as a teacher in future situations. He learns to use religion in such a way that it begets health and does not become food for sick ideas.

Clinical pastoral training brings the minister in contact with persons in crises, other personnel of the healing team, and with himself. From this experience he becomes one who can tolerate weaknesses in others and in himself and becomes more acceptive of his own humanity.

The future, we would hope, will hold not only a highly trained hospital chaplaincy but a ministry throughout the entire State of Arkansas acquainted with religious resources and their practical application that will offer therapeutic benefits to individuals in their illnesses.

WHAT'S NEW?



PATHOLOGY

T. F. Dilday, Jr., M.D.

DETERMINATIONS OF SERUM ENZYME activities are increasingly being used both in research and as a clinical diagnostic tool. Most of us are familiar with the use of serum glutamic oxalacetic transaminase (SGOT) in the diagnosis of myocardial infarction. Another enzyme of usefulness to the practicing physician is lactic dehydrogenase (LDH). This is an enzyme of the glycolytic cycle which reversibly catalyzes the conversion of pyruvate to lactate. LDH can be determined spectrophotometrically with ease. This activity is generally expressed in terms of arbitrary "units".

Recent investigations have demonstrated rising values for this enzyme to two to ten times the normal range after myocardial infarction with elevations persisting for up to ten days. Unlike SGOT the elevation of LDH is not proportional to the size of the infarct; therefore, this large rise makes this a valuable test in some of the smaller infarcts when no rise in SGOT can be detected.

It is important to remember that a single determination of LDH is not specific in the diagnosis of myocardial infarction although the rise and return to normal within four to eleven days

should be considered of diagnostic significance. Other diseases in which LDH may be found elevated are the megaloblastic anemias, leukemia, solid malignant tumors especially in patients with advanced disease and in the spinal fluid of patients with malignant tumors of the central nervous system. An interesting and useful finding is the elevation of LDH in effusion fluid caused by malignant tumors. An elevation of LDH in the effusion fluid compared with that of the serum is strongly suggestive of the presence of malignant cells.

There are certain precautions required in obtaining and handling the blood specimen used in this test. Since erythrocytes are extremely rich in LDH, even slight hemolysis can cause significant elevations in the specimen. Serum taken from clotted blood which has been allowed to remain at room temperature for even short periods may show significant elevations in the enzyme due to leakage from the formed blood elements. The serum should be separated from the cells promptly or else the specimen should be stored in a refrigerator.

TEACHING SEMINAR

*Department of Obstetrics and Gynecology
University of Arkansas Medical Center
Little Rock, Arkansas*



THE MANAGEMENT OF THE CERVICAL STUMP

John B. Nettles, M.D.

Willis E. Brown, M.D.

THE CERVICAL STUMP

FROM A RECENT SURVEY of the records of a majority of the hospitals in Arkansas, it is evident that there are over 1,500 women in the state who have had subtotal hysterectomy during the past 10 years. (Table I) These women, plus those who previously have had subtotal hysterectomy, are subject to benign and malignant disease of the cervix.

Despite the rapidly decreasing numbers and percentage of subtotal hysterectomies, there is a relative and absolute increase in the incidence of cancer as well as benign disease requiring removal or major therapy of the cervical stump as these patients approach the fourth and fifth decades of life.

Therefore, it behooves us to take stock of our management of patients who have had subtotal hysterectomy.

Subtotal Versus Total Hysterectomy

It is obvious that the increased use of hysterectomy rather than the subtotal operation will eventually reduce the incidence of disease of the cervical stump. While competent gynecologic surgeons recognize that the cervix should gen-

erally be removed as part of the operation of hysterectomy, there are and will continue to be a few indications for the subtotal operation, and there are many patients on whom subtotal hysterectomy has already been performed.

While we believe that the cervix should seldom be left in at hysterectomy, we are of the opinion that a fixed position in this matter is unwise. While we recognize that some gynecologists accept no indication for subtotal hysterectomy, we wonder as to the validity of such a dogma. It would be nice to think that all persons performing gynecologic surgery are sufficiently skillful with both the total hysterectomy and the subtotal operation under all conditions, and that their decision in this matter was one of election. On the other hand we suspect that the incidence of major complications, especially damage to the urinary tract, would increase significantly should total hysterectomy be attempted routinely by all surgeons.

Despite these problems, it is *not* necessary that the patient suffer because her cervix was not removed with the fundus. There are several satisfactory subsequent procedures that can and should be done when indicated, such as thera-

peutic conization, or excision of the cervical stump usually done before the patient is discharged from the hospital.

Incidence of Subtotal Hysterectomy

At the University of Arkansas Hospital, 39 subtotal hysterectomies were performed from 1951-55 and 27 from 1956-60 or a total of 66 in 10 years among 2,796 hysterectomies. These represent 3.6% and 1.6%, respectively, of all hysterectomies performed during these periods. Based on a sampling of the majority of the hospitals in the state, the respective percentages in the state are 20% and 7% for the corresponding five year periods. (See Table I). The progressive decrease in the incidence of subtotal hysterectomy has been due primarily to the increased use of the total abdominal operation, although the increased use of the vaginal approach has influenced the statistics. Likewise (Table I) a comparison of the figures for 1950 and 1960 will clearly reflect these changes. (Table II).

Indications for Subtotal Hysterectomy

The indications for subtotal hysterectomy at the University Hospital may be divided into two groups: (1) poor risk patients and/or the technically difficult, and (2) palliative surgery in advanced pelvic malignancies.

When hysterectomy is performed on patients who are poor surgical risks, or in deep shock from blood loss, or where there is gross anatomic distortions, much skill is required to determine whether the shorter, easier subtotal operation should be performed in preference to the total operation. Once hemostasis is accomplished it is often desirable to stop the operation and devote ones efforts to improving the condition of the patient before continuing in the performance of either the total or subtotal operation. Persistence in attempts to continue the surgery, especially the total operation, may precipitate cardiac arrest, irreversible shock, renal failure, and/or death. Once active bleeding has been controlled speed of operation becomes secondary to supportive therapy and consultation should be sought in these difficult cases.

When palliative surgery is being done for pelvic malignancy and gross tumor must be left in the pelvis, we deliberately do not remove the cervix, thus avoiding vaginal vault implants with

its attendant foul-smelling vaginal discharge and bleeding from the tumor mass.

Subsequent Care of the Patient With a Cervical Stump

No cervical stump should be ignored. While the patient with palliative subtotal hysterectomy for malignant disease may require little subsequent attention to the cervix, in benign disease a therapeutic conization or excision of the cervix should be carried out before the patient leaves the hospital. When this is done all troublesome late symptoms can be obviated, and the patient is freed of the possibility of carcinoma of the cervix. Such conization should remove the squamous columnar junction and the gland-bearing area of the cervix.

When immediate postoperative treatment of the cervix is impossible, it is the responsibility of the surgeon to complete his obligations as soon as feasible.

What should be done for the patient who has an untreated cervical stump? We believe that generally these patients should have either a conization or excision of this troublesome remnant. Conization, like excision, has traditionally been done in the operating room of the hospital. Because of the expense involved, we are in the process of developing an emergency room method of conization which we hope will facilitate care of patients needing conization. Until this method is developed, it is probably best that these patients be hospitalized for these procedures.

If a patient presents herself many years post-subtotal hysterectomy and she is asymptomatic, the cervix appears healthy, and cytology smears are normal, definitive therapy may be elected. If there are cervical symptoms or obvious disease, or if surgery is required for pelvic relaxation, excision of the cervix is preferred. Because of the frequency of carcinoma of the cervical stump, malignancy should be ruled out by cytology and multiple biopsy prior to surgery.

Patients with untreated asymptomatic cervical stumps, if not treated, should at least be followed with periodic pelvic examination and cytology every 6 months.

CONCLUSIONS

1. Total hysterectomy is rapidly supplanting the incomplete operation in Arkansas. It is estimated that there are 4,000 women with

- cervical stumps in Arkansas at the present time.
2. Subtotal hysterectomy is specifically indicated in the poor risk patient, difficult technical problems, and in advanced pelvic malignancy.

TABLE I*

	UNIVERSITY OF ARKANSAS		ALL HOSPITALS	
	1951-55	1956-60	1951-55	1956-60
Number of Subtotal Hysterectomies	39	27	997	547
Number of Total Abd. Hysterectomies	468	789	4,892	7,640
Vaginal Hysterectomies	575	899	1,386	2,375
Total Number of Hysterectomies	1,081	1,715	7,275	10,562
Subtotal Hysterectomy per 100 Hyst.	3.6	1.6	12.7	5.2
Subtotal Hysterectomies per 100 Abd. Hyst.	7.7	3.3	16.9	6.7
Carcinoma of Cervical Stump	5	13	19	32
Carcinoma of Cervix (All Cases)	456	505	768	893
Excision Cervical Stump	20	38	VALID DATA NOT AVAILABLE	

TABLE II*

	UNIVERSITY OF ARKANSAS		ALL HOSPITALS	
	1951	1960	1951	1960
Number of Subtotal Hysterectomies	9	5	237	105
Number of Total Abd. Hyst.	27	141	610	1,676
Vaginal Hysterectomy	106	204	239	591
Total Number of Hysterectomies	142	350	1,086	2,372
Subtotal Hysterectomies per 100 Hyst.	6.3	1.4	21.8	4.4
Subtotal Hysterectomies per 100 Abd. Hyst.	25.0	3.4	28.0	5.9
Carcinoma Cervical Stump	1	5	8	13
Carcinoma Cervix Total	111	86	180	181
Excision Cervical Stump	3	14	DATA NOT AVAILABLE	

*The authors wish to thank the many Medical Librarians in the Arkansas Hospitals for their cooperation in collecting the statistics for this article.

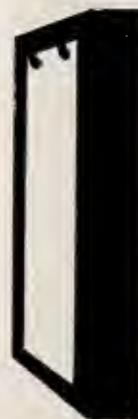
ABSTRACTS

Papillary Carcinoma of the Gallbladder — F. J. Wolma and J. B. Lynch
Arch Surg—Vol. 83:657 (Nov.) 1961

An illustrative case of papillary carcinoma of the gallbladder is presented which demonstrates the early spread of this tumor to the regional lymph nodes in the porta hepatis. The diagnosis of papillary carcinoma of the gallbladder is most often made by the pathologist several days following routine cholecystectomy for cholelithiasis. No further surgery is usually carried out. Since papillary carcinoma of the gallbladder has been demonstrated to spread to the regional lymph

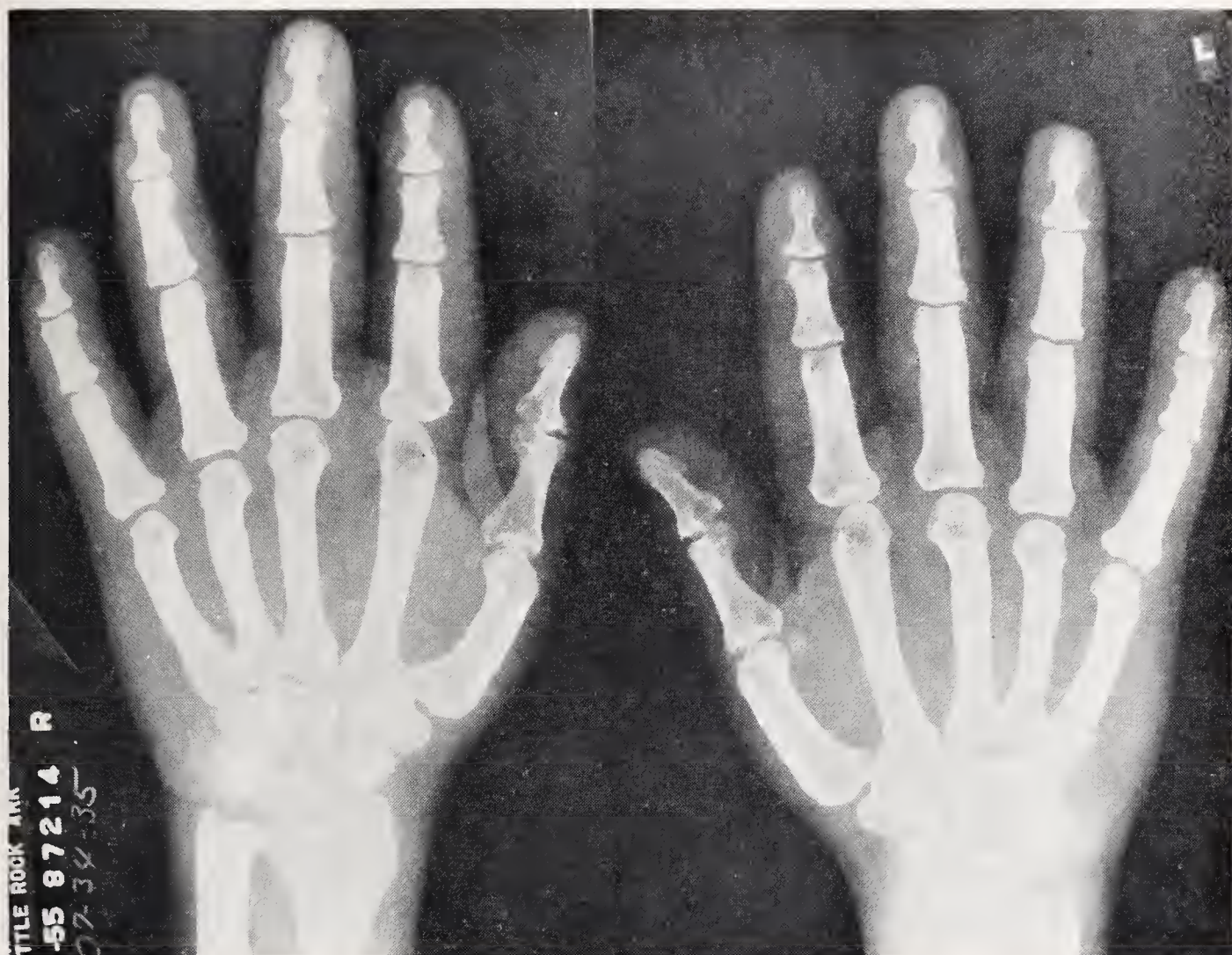
nodes in the porta hepatis, cholecystectomy alone is considered inadequate. Therefore, all gallbladders removed surgically should be immediately opened and carefully examined. If an early papillary lesion is found, frozen section is recommended. If a papillary carcinoma is confirmed by frozen section examination, the minimum operation recommended, in addition to cholecystectomy, is careful lymph node dissection of the porta hepatis from the hilum of the liver to the duodenum and wedge resection of the gallbladder bed in the liver. Diagrams of the steps in the procedure are presented.

WHAT IS YOUR DIAGNOSIS?



Prepared by the
Department of Radiology, University of Arkansas
School of Medicine, Little Rock

FEATURES

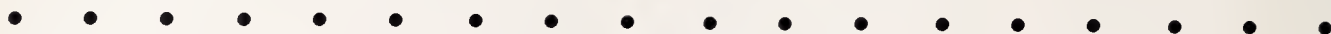


ANSWER ON PAGE 352

ELECTROCARDIOGRAM



OF THE MONTH



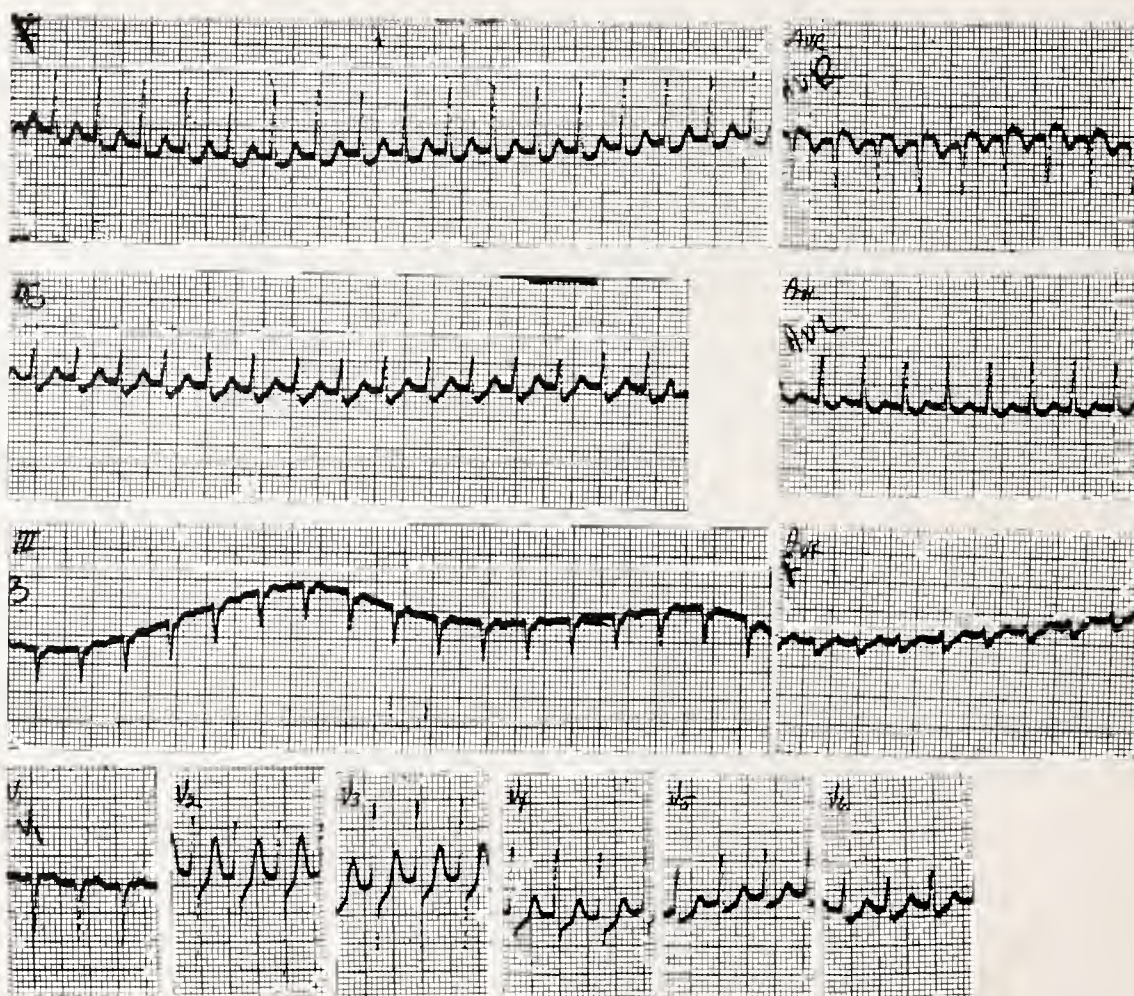
WHAT IS YOUR INTERPRETATION?

Age: 62 Sex: F Build: Stocky Blood Pressure: 162/100

Medication: None

History: History of attacks of rapid heart action.

Answer on Page 353



Prepared by J. S. Taylor, M.D., Professor of Medicine
The Department of Medicine
University of Arkansas Medical Center



PUBLIC HEALTH AT A GLANCE

TETANUS IN ARKANSAS

Jan. 1, 1961—Nov. 4, 1961

In the period from January 1, 1961 to November 4, 1961 there were ten cases of human tetanus reported to the Arkansas State Board of Health. Five of these cases terminated fatally; the other cases survived. The ten cases were rather widely scattered over the State. Seven cases were adults. Of the seven there were four fatalities, all occurring in individuals over 50 years of age. The three non-fatal adult cases involved persons aged 64 years, 24 years, and 39 years. Of the three cases involving children, only one, a case of neonatal tetanus was fatal.

Tetanus, whether in man or animals, is a wound infection requiring broken skin for the passage of the organism. The period of incubation for the disease depends on the site of the injury, among other factors. The incubation period varies because many factors seem to influence the rate of multiplication of the organism and subsequent release of toxin. In man, the average incubation period is seven days. Symptoms are mainly due to spasmodic muscular contractions.

The distribution of the spores which cause tetanus (lockjaw) is quite universal. Tetanus bacilli are especially abundant in soil which contains human or animal excreta. Spores of the tetanus organisms have been found in hay dust, in the mortar of old masonry, in the dust in houses, barracks, hospitals, and in court plaster. One might expect to find such a resistant organ-

ism any place that the wind might blow the dust of the soil. The natural habitat of tetanus organisms is the intestine of the herbivorous animals (horse or cow), and, to a less degree, man acts as an intestinal carrier.

Tetanus is a preventable disease, and deaths such as described above point to inadequate immunization of a community, or area. Immunization with tetanus toxoid should be accomplished in infancy, and booster doses given periodically through life, and when an exposure occurs. When immunization has not been maintained to the recommended schedule, or when there has been no immunization, tetanus antitoxin in sufficient doses is administered upon exposure.

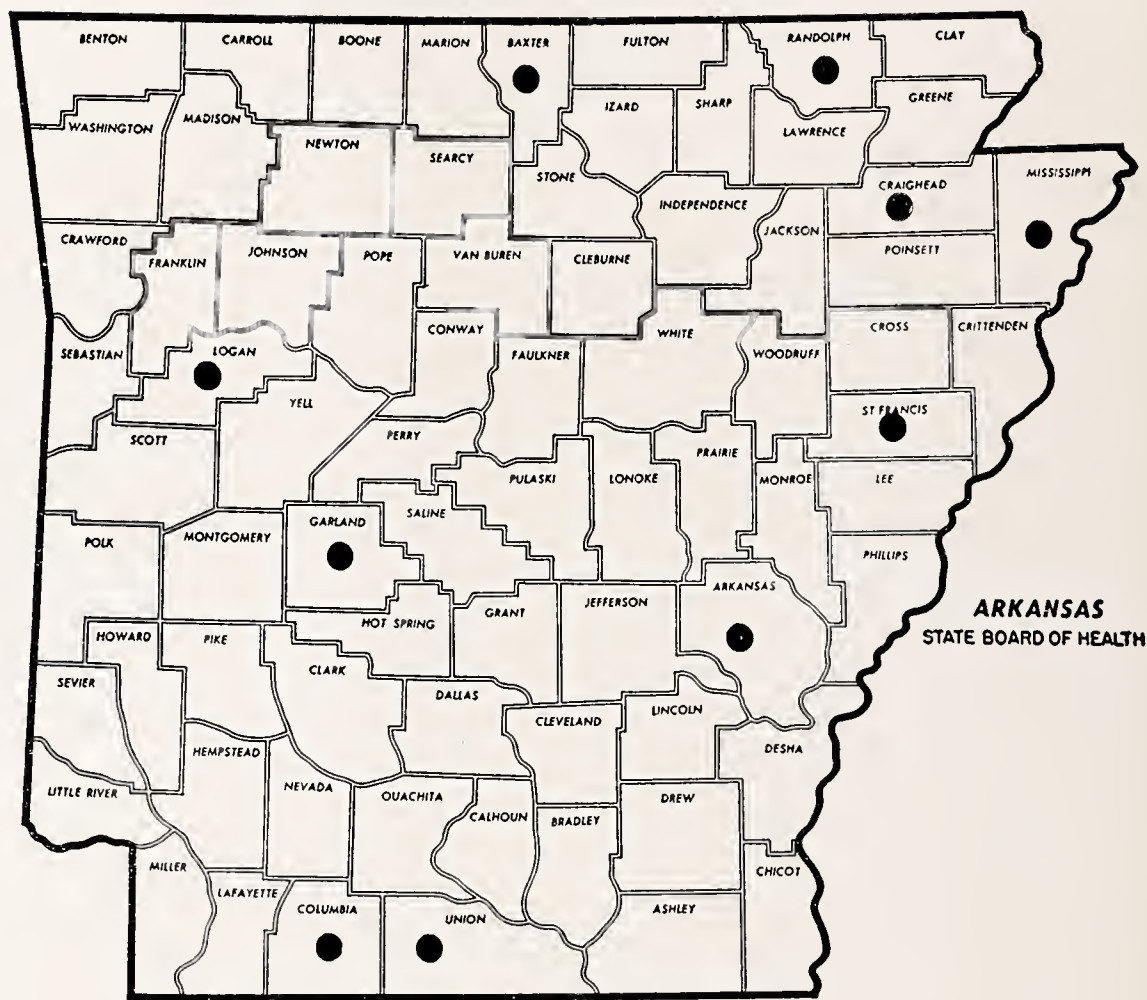
The literature provides information in which even incomplete immunization with tetanus toxoid has prevented death from tetanus infection. The most remarkable case was a four-year-old boy who survived the disease although he was given only one injection of toxoid in infancy. Many cases of tetanus result from slight injuries received around the home, farm, and highway.

Immunization with tetanus toxoid is especially essential for individuals who live and work on farms or engage in construction and outdoor work. From a Civil Defense standpoint mass immunizations of the community is important. In cases of civil emergency when people are forced to live under primitive crowded conditions and are exposed to many types of injury, the more individu-

als protected by active tetanus immunizations, the less tetanus is likely to be a public health problem in these situations.

The 1960 revision of the Arkansas State Board of Health Immunization Policies contains a recommended schedule for maintaining active immunity against tetanus. After primary immu-

nization and the early school years booster injections of adult-type diphtheria tetanus toxoid at 3 to 4 year intervals and at times of exposure provide continued active immunity against both tetanus and diphtheria. Individual immunization record forms may be obtained from local health departments.





EDITORIAL

Fashions in typography and in the presentation of printed scientific material change from time to time. As in ladies' dress styles, there is a wide spectrum of format and print style from which to choose. It is clear that a "Gravel Gertie" in even a Dior gown is not likely to attract many admiring glances. By the same token, Marilyn Monroe would be considerably handicapped by a last year's dress. For the most part, it's what's inside that counts.

Nevertheless, we feel that the new appearance of The Journal of The Arkansas Medical Society is desirable. It will enhance its readability. It will have more "eye" appeal. It will look more modern, and less conservative. We think it will have more distinctiveness. We feel that readers, authors, and advertisers will benefit by this.

This is your Journal and we hope you like the change.

A.K.

INTERNATIONAL RELATIONS AND MEDICINE

R. B. Robins, M.D.

The author recently had the opportunity of attending the annual assembly of the World Medical Association in Rio de Janeiro, Brazil as one of the four official delegates from the United States. Fifty-six nations and 700,000 physicians are represented by this world medical organization. Some observations were made that may be worthy of comment.

There is need for a universal language in this world. The proceedings of this assembly were simultaneously translated into five languages, viz., English, German, French, Spanish and Portuguese. The participants wore headsets and turned the button to the language which they wanted to hear. In private conversations with the various physicians of the world it was necessary to use the services of an interpreter. There are many misunderstandings over the world due to failure to properly communicate with one another. Physicians, as good citizens, should exert their influence to encourage our schools in the United States

to give more attention to teaching conversational courses in the various foreign languages.

Americans, when traveling abroad, should be careful in remarks that they make about their country as compared to the country in which they may be visiting. So often there is a tendency innocently to make comparisons that leave the impression that Americans feel superior to other countries and this is resented very much by the native people. It is highly important from the standpoint of good international relations that we respect the customs and feelings of other nationalities as we travel around the world. We can obtain many valuable ideas in medicine from the people of other lands.

More interest is being manifested in international health. The American Medical Association has recently established a Department of International Health. The World Medical Association has been doing a great job in effecting a closer liaison among the doctors of the world; acting as



Medrol... (methylprednisolone) a form for every use

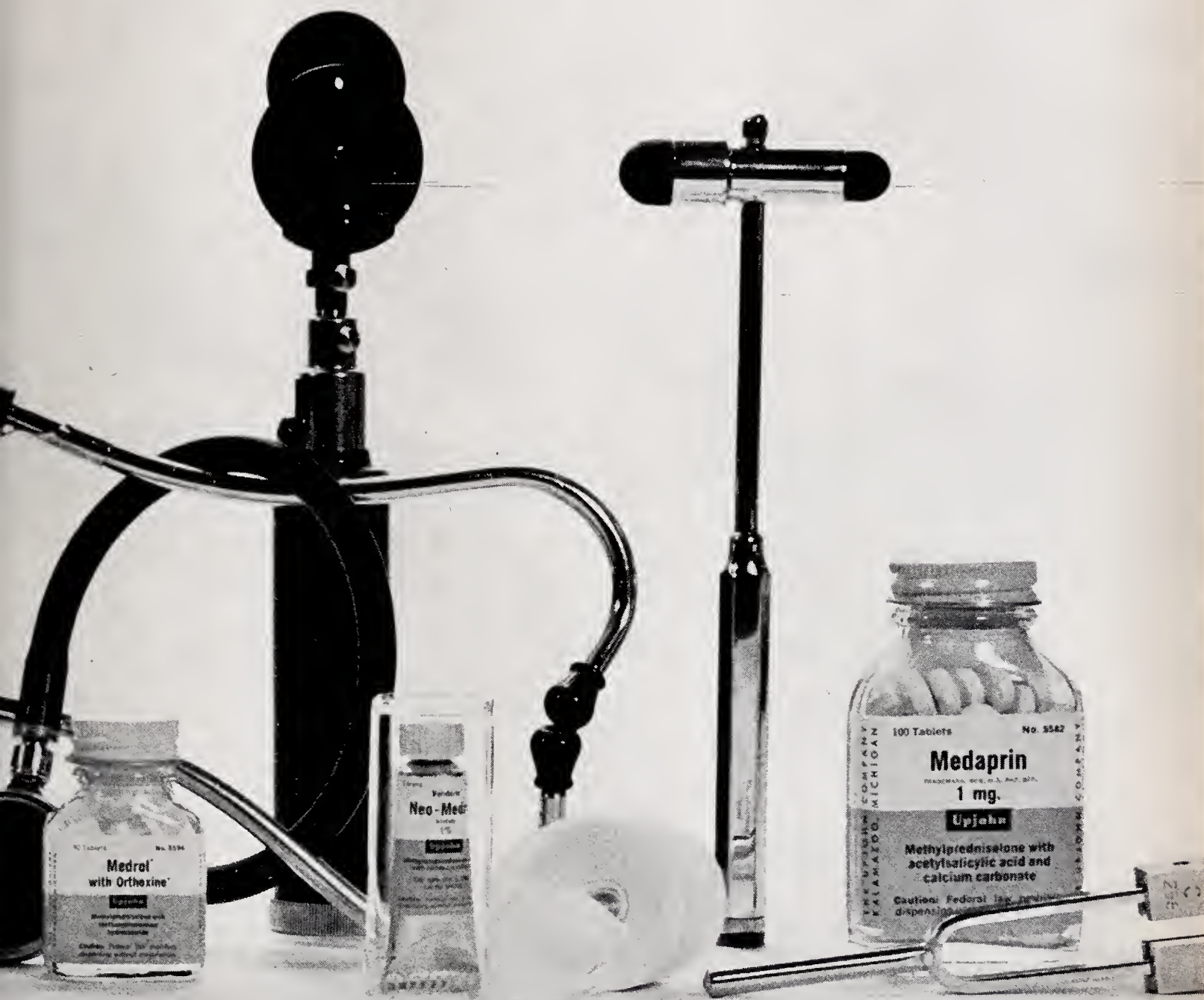
MEDROL* TABLETS

2 mg. in bottles
of 30 and 100
4 mg. in bottles
of 30, 100 and 500
16 mg. in bottles of 50

SOLU- MEDROL* 40 mg. in 1 cc. Mix-O-Vial*

MEDROL MEDULES* 4 mg. in bottles of 30, 100 and 500 capsules 2 mg. in bottles of 30 and 100

DEPO- MEDROL* acetate 40 mg./cc. in 1 cc. and 5 cc. vials 20 mg./cc. in 5 cc. vials



**MEDROL
WITH ORTHOXINE***
TABLETS
in bottles of 30 and 100

**VERIDERM† MEDROL_{acetate}
AND
NEO-MEDROL*_{acetate}**
0.25% and 1%
in 5- and 20-Gm. tubes

MEDAPRIN* TABLETS
in bottles of 100 and 500

*Trademark, Reg. U.S. Pat. Off.

†Trademark

Copyright 1961, The Upjohn Company
September, 1961

The Upjohn Company, Kalamazoo, Michigan

Upjohn

a center of world medical information; serving as a forum for discussion of international medical problems; acting as a spokesman for the medical profession before other international bodies; helping to raise the standards of health, medical care and medical education throughout the world; and improving international relations. This organization deserves the active support of all physicians in the United States.

As physicians and citizens we should see that

medicine plays its full role, not only in promoting better world health, but also in helping to promote brotherhood and peace in this world. These are just simply extensions of our local responsibilities as good citizens. Medicine has a great opportunity to play a very effective part in bringing reality to the dream of world peace. Politicians and dictators may have their selfish designs, but medicine, like music and religion, speaks a universal language which passes all the barriers of race, creed, color or nationality.

ABSTRACTS

Pathogenesis of Congestive Heart Failure: Effect of Posture and Exercise on Plasma Volume and Plasma Constituents

L. T. Iseri, E. L. Balatony, J. R. Evans,
and M. G. Crane

Ann Intern Med—Vol. 55:384 (Sept.) 1961

Metabolic studies and electrolyte studies of the plasma in patients in congestive heart failure suggested that certain changes occur in the cells which might be responsible for the accumulation of salt and water. The effects of posture and exercise on plasma volume and plasma constituents were studied in patients with mild cardiac disorders, by following changes in the radio-iodinated serum albumin, hematocrit, and plasma osmol and sodium concentrations. When patients changed from recumbent to standing position, the plasma volume decreased and the hematocrit increased, but the plasma osmol and sodium concentrations remained the same. No change in plasma volume occurred when patients were made to stand in deep water. These observations indicate transudation of plasma ultrafiltrate from the capillaries into the interstitial spaces, because of increased hydrostatic intracapillary pressure. With light exercise on the treadmill or on the 2-step platform, the plasma volume decreased and the hematocrit, osmol and sodium concentrations increased. The circulatory stress of exercise seems to cause an increase in osmotic pressure of the cells, resulting in migration of water from plasma into cells. These changes seem to initiate active

renal retention of salt and water in the pathogenesis of congestive heart failure.

Muscle Blood Flow Studies in Tension Headaches

Y. Onel, A. P. Friedman, and J. Grossman

Neurology—Vol. 11:935 (Nov.) 1961

Indirect observations of bulbar conjunctival vessels and cranial arterial pressure pulses have suggested that tension headache is partly attributable to ischemia. A more direct method, namely local Na^{24} tissue clearance, was therefore employed to measure muscle blood flow in patients with tension headaches. A total of 71 studies were performed on 51 patients with tension headache during both symptomatic and asymptomatic intervals and 5 nonheadache control subjects. $\text{Na}^{24} \text{Cl}$ ($4 \mu\text{c.}$) in 0.2 ml. of isotonic saline were injected into the splenius capitis and the decline of local radioactivity was measured. Data were plotted semilogarithmically, and clearance was expressed as the slope of the straight line was obtained. In the absence of headache, slopes varied from 0.05-0.14/min. with a mean of 0.094/min. During headache the slopes ranged from 0.09-0.17/min. with a mean of 0.12/min., a statistically significant difference ($P < 0.01$). The results indicate that during tension headache either the local muscle effective capillary blood flow is increased, or possibly that capillary permeability to Na^{24} is enhanced.

MEDICINE IN THE



Fluoridated Water for West Memphis

West Memphis' drinking water will be fluoridated "as soon as conditions permit" and the mechanics of the project can be worked out. West Memphis voters decreed that the chemical be added to the water when they approved a proposal which had been advanced by members of the junior auxiliary.

The proposal had the backing of the Arkansas Medical Association and was promoted on the local level by members of the dental profession. The project was undertaken with a view toward providing added protection against dental decay.

* * *

Arkansas Will Participate in Food Service Program

Arkansas has been selected as one of seven states to participate in an experimental program to train food service supervisors and the program was explained at a meeting of the Arkansas Dietetic Association. Miss Sally J. Mooring of Chicago, director of the Food Service Supervisors' Program of the American Dietetic Association, discussed the program, which will be financed by the Kellogg Foundation and participating hospitals.

The program will attempt to set up a correspondence course to teach persons working in hospitals the fundamentals of food service. The students also will work under preceptors who are trained dietitians in the hospitals.

* * *

Multiple Sclerosis Goals Noted by O. P. Hammons

"Expansion in patient services and research are the objectives of the National Multiple Sclerosis Society for the coming year," said O. P. Hammons, member of the Arkansas State Board of Multiple Sclerosis Society, on his return from the organization's southwestern region conference in Dallas, Texas.

"Our Society is working to do more for MS patients while research endeavors to find cause and cure of the illness," said Mr. Hammons. "A good portion of our conference time was spent in discussing and planning ways and means of enlarging the scope of patient services so much needed in our communities."

"Most informative for all delegates," said Mr. Hammons, "was the report of Dr. Thomas L. Willmon, our Society's medical and research director Dr. Willmon, recently returned from the International Congress of Neurology in Rome, Italy, which features a panel on multiple sclerosis, reported on research advances in the battle against MS and described the role of the organization in stimulating development of MS Societies abroad and neurological research overseas."

Highlighting the conference was a presentative of a \$12,000 research check to Dr. Sven G. Eliasson, Neurology Department, Director at Southwestern Medical School. Dr. Eliasson is conducting basic research into the cause and cure of multiple sclerosis.

* * *

Arkansas Obstetrical and Gynecological Society Holds Meeting

The Arkansas Obstetrical and Gynecological Society held its 1961 annual meeting at the Holiday Inn, Texarkana. Doctor H. L. Riva, Professor and Head of the Department of Obstetrics and Gynecology at Seton Hall College of Medicine, Jersey City, New Jersey, was Guest Speaker. He spoke on "Acridine Orange Fluorescent Microscopy and Gynecologic Cytology" and on "Experience with Progestins in Endometriosis." Doctor Charles Reid of Pine Bluff presented a paper "Obstetric Trends in Jefferson County Arkansas, 1940 to 1960" and Doctor Hoyt L. Choate of Little Rock talked on "Rupture of the Uterus." Doctor Albert Hand, a Pathologist and Pediatrician of Shreveport, Louisiana, moderated a panel on "Pre

and Post Maturity," assisted by Doctor Haynes Jackson of Hot Springs, Doctor J. Royston Brown of Texarkana, and Doctor Betty Lowe of Texarkana. Doctor Robert L. Sherman of Ft. Smith moderated a panel on "Post-operative Complications of Hysterectomy," assisted by Doctor Charles Yarbrough, Doctor Richard Brunazzi and Doctor Wm. Shields, all of Texarkana.

Doctor G. D. Royston of Hope, a retired Obstetrician and Gynecologist and former President of the American Board of Obstetricians and Gynecologists spoke following a banquet at the Texarkana Country Club.

Doctor J. O. Porter of Little Rock was elected President of the Society. Other officers and members of the Executive Board are Doctor James B. Kittrell of Texarkana, Immediate Past President; Doctor Robert F. McCrary of Hot Springs, Vice President and President-Elect; Doctor J. Travis Crews of Little Rock, Corresponding Secretary; Doctor James W. Harrison of Texarkana, Immediate Past Corresponding Secretary; and Doctor John B. Nettles of Little Rock, Executive Secretary.

The next meeting will be held during the meeting of the Arkansas State Medical Society at Hot Springs. Doctor Roy Parker of Duke University, Durham, North Carolina, will be the Guest Speaker.

* * *

Heart Surgery Advance Achieved by Arkansas

In some cases, smaller doses of digitalis work as well as normal doses to support heart functions after open heart surgery, a team of Little Rock physicians has observed.

They reported on their findings during the 34th scientific sessions of the American Heart Association in Miami Beach, Florida.

Dr. James E. Doherty, VA Consolidated Hospital cardiologist and principal investigator, read the paper. Other contributors were Dr. Ben M. Lincoln, a Little Rock surgeon; Dr. Masauki Hara, who has headed open heart surgery at the University Medical Center for several years, and Dr. William H. Perkins, chief of the VA Hospital's radioisotope service.

Arkansas Heart Association grants have helped finance the study. Open heart surgery involves use of equipment which takes over heart and lung functions so the heart can be stopped beating temporarily for the operation. When the heart is called on to begin functioning again, the pa-

tient is more sensitive to certain drugs, the researchers have found. Yet drugs are needed to support the heart for a time.

One of the primary drugs is digitalis, a drug commonly used in heart failure. But, as any good drug, it is toxic when used in large dosages.

The physicians have scaled down the dosages of this toxic drug in experiments with animals and have noted that in many cases it works just as well. And the smaller dose apparently has no other harmful effects.

* * *

THE MONTH IN WASHINGTON

WASHINGTON, D. C.—The Public Health Service said that radioactive fallout levels resulting in the United States up until early November from the new series of Soviet nuclear explosions "do not warrant undue public concern" nor initiation of any special public health action.

The federal agency said that the prevailing levels were not high enough for the public to be concerned about the safety of milk and other foodstuffs.

But PHS added that "continuous, intensive surveillance" by federal, state and local governments was justified.

In a special statement issued after a two-day conference of government and private radiation experts, the PHS pointed out that "very little is known about the effects on animals or humans of very low but prolonged exposures" from either natural background radiation or fallout from nuclear tests.

"The consensus of scientific opinion is that the most prudent course is to assume there is no level of radiation exposure below which one can be absolutely certain that harmful effects may not occur to at least a few individuals when sufficiently large numbers of people are involved," the PHS said. "This is known as the 'non-threshold' concept."

This concept is the basis for U. S. policies and programs for assessment of radiation hazards and for control measures designed to limit exposures of the population, the PHS said and added:

"When this non-threshold concept is applied to present radiation exposure levels being experienced in the U. S. from all sources, including fallout, the following assessment can be made:

"The extra radiation caused by the Soviet tests will add to the risk of genetic effects in succeeding generations, and possibly to the risk

of health damage to some people in the United States. It is not possible to determine how extensive these ill effects will be—nor how many people will be affected. At present radiation levels, and even at somewhat higher levels, the additional risk is slight and very few people will be affected. Nevertheless, if fallout increased substantially, or remained high for a long time, it would become far more important as a potential health hazard in this country and throughout the world.

“It is the obligation of our Federal and State governments to undertake all possible measures to assess accurately the public health significance of the present fallout situation, and to prepare for actions to safeguard the public health if these become necessary.”

Federal officials said radioactive fallout on the United States will increase next February, March, April and May when the late winter and spring rains wash to earth the remainder of the fallout from the Soviet nuclear tests but it isn't expected to reach a danger level. President Kennedy said any U. S. nuclear tests in the atmosphere would be designed to hold radioactive fallout to an absolute minimum.

The PHS said that the nation's health authorities are giving careful consideration to the possible situations that might require various corrective actions.

“It is evident that an important element of health protection is continuous surveillance and analysis,” the PHS said.

“To achieve this, a number of Federal-State systems for public health surveillance, detailed investigation, and radiation control measure have been developed . . . In cooperation with State and local health departments, the PHS operates a nationwide early warning atmospheric radiation surveillance network currently comprised of 58 stations, and a 60-station milk radiation monitoring system. In addition, the PHS has well-established networks for general air and water pollution monitoring with a total of 343 stations. All of these include radiation monitoring among their capabilities and all are being expanded. For example, daily samples of drinking water are being collected in 12 major cities and analyzed for specific radioactive content on a weekly basis, and plans are ready for more extensive monitoring if necessary. Rounding out the PHS resources is a

system of highly specialized regional radiological health laboratories.

“The Food and Drug Administration has expanded its program of monitoring the levels of radioactive contamination in foods. Working through 18 District offices and 39 Resident Inspection Stations, its inspectors are sampling foods from all parts of the Nation; particularly those areas where the Public Health Service's air monitoring network has indicated the highest concentration of atmospheric contamination. Additionally, FDA collects samples from selected lots of food being imported into the United States.

“These samples are being analyzed for total beta activity and selected samples are further tested to determine what specific radioisotopes are present and in what amount.

“In addition there are the extensive special-purpose radiation surveillance and research facilities of the Atomic Energy Commission and the Departments of Defense, Commerce, and Agriculture.

“All Federal programs and resources work in close concert, and follow the same radiation protection standards, through the coordinating influence of the Federal Radiation Council . . .

Supplementing these Federal programs and resources is a steadily increasing radiological health capability among State and large city governments. Their programs are usually centered in the departments of public health, with certain special responsibilities often located in other agencies such as State or city departments of public safety. At every level of government, resources and programs are being expanded to cope with the potentially hazardous situation the nation now faces.

DM

* * *

North Little Rock Memorial Hospital Opens

Norman Roberts, Administrator of the Memorial Hospital, announced that the hospital would open for use this month. Installation of equipment began in December.

* * *

Hope Plays Host to the 14th Annual Nurses' Meet

The 14th annual Convention of Arkansas State Licensed Practical Nurses Association was held in Hope. The meeting opened with a pre-convention session of the executive board. During the second

day of the convention, the visitors toured historic old Washington, followed by a reception. The convention got into full swing with a general meeting at Hope City Hall; the theme was "Focus on the Future." Following a report by committee heads, Miss Berdie Ross gave the president's message. At the noon luncheon at Hotel Barlow, the principal address was made by A. A. Weintraub, president, Arkansas Hospital Association and W. E. Beaumont, Jr., secretary of the American Nursing Home Assn., discussed opportunities for practical nurses. An executive session was held during the afternoon. At a dinner meeting at Hotel Barlow, Dr. R. B. Robins, member of the Board of Trustees, American Medical Association discussed "Federal Aid to Education." His talk was followed by an address from Congressman Oren Harris.

* * *

Doctor Tells How Congressional Hearing Conducted

Dr. J. J. Monfort told members of the Batesville Kiwanis Club how a Congressional hearing is conducted. Dr. Monfort, as immediate past president of the Arkansas Medical Society, appeared at a hearing on the King Bill, a measure before the last session of Congress to establish a compulsory health-care program for everyone covered by Social Security.

Dr. Monfort spoke for ten minutes against the bill. He pointed out that the Arkansas Medical Association favored the Kerr-Mills law which provides for Federal grants-in-aid to the individual states, enabling them to provide health care for those among the elderly who need help. He said he was asked two questions after his talk. One was from the author of the King Bill, who asked him if he had read the bill and the other question asked if Arkansas was against the King Bill. The hearing was conducted by Congressman Wilbur D. Mills. Dr. Monfort said he followed George Meaney, president of the AFL-CIO, who spoke for 45 minutes in favor of the bill. After his talk, Dr. Monfort said Meaney was asked some "blistering" questions.

* * *

Dr. Earle McKelvy Addressed Technologists Seminar

Dr. Earle D. McKelvy, former consultant for the American Bar Association, of Paragould, was the principal speaker at the 8th Annual Texar-

kana Scientific Seminar of American Medical Technologists.

Approximately 150 medical technologists attended the seminar. Mono Cheatwood, M. T., Shreveport, La. was chairman of the seminar. Donald Dill, Second Air Force, Barksdale Air Base, discussed "Radiation Syndrome in Man." L. J. Barberouse, chief bacteriologist and clinical laboratory supervisor, Veterans Hospital, Shreveport, discussed "A Comparative Study of Four Media for the Isolation of Mycobacterium Tuberculosis." "Rapid Exfoliate Cytology with the Acridine Orange Fluorescent Microscopy" was discussed by Robert Rowden, M.T., Forrest City, Ark. The final talk was by William Rutledge, M.T., Memorial Hospital, Forrest City, "Rapid Screening Test for BUN, Blood Sugar, Bilirubin, Total Protein, and Acid Phosphatase."

* * *

Birth Defects Center

Tentative plans for a birth defects center at the Medical Center in Little Rock were revealed by Burr Gibson of New York, fund-raising director of the National Foundation.

He spoke to directors of 34 Arkansas county chapters at a one-day March of Dimes conference in the Velda Rose Motel. "How fast we can go on developing the planned birth defects facilities will depend a great deal on the response to the March of Dimes campaign," he declared. Gibson pointed out that birth defects, congenital malformations present at birth but not due to birth injury, are the largest unmet problem in childhood medicine and may cause death or crippling in some 250,000 children born annually. He said care at the proposed birth defects center would be open to children through 18 years of age.

Gibson spoke generally on dollar targets, organizational and promotional plans for 1962. He set forth three goals in what he termed new areas, arthritis and birth defects—which have only been a part of the foundation program for two years. He listed the first goal as research, second, training of medical manpower, and third, patient aid, that of helping out families of patients.

Gibson declared, "Just as we found a preventive for polio, we now will try to find preventives for arthritis and birth defects—and if anyone can do it, we can." He pointed out the National Foundation for Infantile Paralysis was organized 20 years ago to conquer a single disease. "The goal was to prevent paralytic polio and to provide patients

the best in modern medical care," he said. "Some 50,000 patients are now on the National Foundation rolls and will remain a responsibility of your foundation. With the support of the American people, this mission has been accomplished to the point where the organization now can turn its vast resources to the solution of other perplexing diseases."

Gibson said, "The rheumatic diseases, including arthritis, affect at least 11 million persons, often causing severe disability and economic loss. Rheumatoid arthritis, the most serious type, annually affects some 30,000 children and adolescents."

He explained that the National Foundation will work with children in the beginning, offering patient aid to those through 18. "The most good can be done for this group. Many will require treatment similar to that prescribed for paralytic polio. This program of patient aid, coupled with

research into cause and prevention, in time will benefit all victims of arthritis."

* * *

Heart Symposium to Be Held in Philadelphia

The Heart Association of Southeastern Pennsylvania announces a two-day scientific session on "The Application of Computers in Cardiovascular Disease," to be held at the Sheraton Hotel—Philadelphia, Pa., on February 27 and 28, 1962.

The sessions will be on the following:

"Introduction to Computer Analysis"

"Application of Computers in Biomedical Science"

"Application of Computers in Cardiovascular Research"

"Application of Computers in Cardiovascular Diagnosis"

"Use of Computers in Hospital Administration" and "Use of Computers in Psychiatry."

+ + + + + + + + + + +

THINGS TO COME



Postgraduate Course to Be Given in Little Rock

The Department of Pediatrics, The University of Arkansas Medical Center, Little Rock, Arkansas in cooperation with the Arkansas Medical Society, The Arkansas Academy of General Practice, the Arkansas Academy of Pediatrics, and the National Foundation will present a postgraduate course for practitioners February 7 and 8, 1962 at the University of Arkansas Medical Center. It will be all of the 7th and through Noon of the 8th.

Four excellent speakers will be there:

Dr. Vincent C. Kelley
Professor of Pediatrics
Univ. of Washington School of Medicine
Seattle, Washington

Dr. Lytt I. Gardner
Professor of Pediatrics
New York State University
Syracuse, New York

Dr. Gordon Millichap
Mayo Clinic
Rochester, Minnesota

Dr. Alex Steigman
Professor of Pediatrics
Louisville University School of Medicine
Louisville, Kentucky

No registration or tuition fees are required; all are invited to attend this postgraduate course.

* * *

Mid-South Post-Graduate Medical Assembly

The Seventy-third Annual Meeting of the Mid-South Post-graduate Medical Assembly will be held at the Peabody Hotel in Memphis, Tennessee on February 13, 14, 15, 16, 1962.

* * *

Surgeons to Hold Meeting

The American College of Surgeons will hold the third of four 1962 sectional meetings in Memphis, Tennessee, March 26 through 28. More than 400 doctors are expected to attend this scientific ses-

sion, to be held in the Peabody Hotel. All members of the medical profession are invited.

The advisory committee on local arrangements, under the chairmanship of Dr. Harwell Wilson, professor and chairman of the department of surgery, University of Tennessee College of Medicine, has planned a program of interest to general surgeons and specialists. Subjects to be discussed include surgical management of pancreatitis, acute staphylococcal enterocolitis, new methods of diagnosis in diseases of the gastrointestinal tract, plication for intestinal obstruction, stricture of the common duct, cerebral arterial insufficiency, chemotherapy as adjunct to surgery, endocrine influence on cancer growth, differential diagnosis of jaundice, management of surgical patients on steroids, anticoagulants, and antibiotics.

Dr. Robert M. Zollinger, Columbus, president of the College, will moderate a panel on gastrointestinal bleeding of unknown etiology on the opening morning. Other guest speakers include I. S. Ravdin, Philadelphia; Michael E. De Bakey, Houston; Rudolf J. Noer, Louisville; Champ Lyons, Birmingham; Curtis P. Artz, Jackson; Murray M. Copeland, Houston; Alton Ochsner, New Orleans; Warren H. Cole, Chicago; Truman G. Blocker, Galveston; Oscar P. Hampton, St. Louis; and Charles A. Hufnagel, Washington, D.C.

The final 1962 sectional meeting will be held in Washington, D. C., April 16-18. The annual Clinical Congress will be October 15-19, in Atlantic City.

THE GILL MEMORIAL EYE, EAR AND THROAT HOSPITAL

Announces to the Profession

its

THIRTY-FIFTH ANNUAL SPRING CONGRESS

in

OPHTHALMOLOGY AND OTOLARYNGOLOGY

and

ALLIED SPECIALTIES

April 2 through April 6, 1962

Among the guest speakers are:

J. Gordon Cole, M.D.....New York, N. Y.
LeRoy Crandell, M.D.....Winston-Salem, N. C.
David D. Donaldson, M.D.....Boston, Mass.
Richard T. Farrior, M.D.....Tampa, Fla.
Miles A. Galin, M.D.....New York, N. Y.
W. Horsley Gantt, M.D.....Baltimore, Md.

R. D. Harley, M.D.....Atlantic City, N. J.
R. L. Hilsinger, M.D.....Cincinnati, Ohio
Blaine S. Nashold, M.D.....Durham, N. C.
George Pack, M.D.....New York, N. Y.
Marshall M. Parks, M.D.....Washington, D.C.
A. Benedict Rizzuti, M.D.....Brooklyn, N. Y.
A. D. Ruedemann, M.D.....Detroit, Mich.
Herbert O. Sieker, M.D.....Durham, N. C.
Byron Smith, M.D.....New York, N. Y.
James Snead, M.D.....Roanoke, Va.
P. D. Trevor-Roper, M.D.....London, England
Richard Troutman, M.D.....Brooklyn, N. Y.
Harry J. Warthen, M.D.....Richmond, Va.
Peter Pastore, M.D.....Richmond, Va.

FOR FURTHER INFORMATION WRITE:

Superintendent, P. O. Box 1789, Roanoke, Va.



OBITUARY

DR. JOHN MITCHELL STANFORD, 82, of Russellville died in a Little Rock hospital recently. He had practiced medicine in Pope County 53 years. He was a graduate of the University of Tennessee School of Medicine and took special training at Mayo Clinic in Rochester, Minn. He was a Presbyterian, a Mason, a member of the Arkansas Medical Society and an honorary member of the American Medical Association.

* * *

DR. LYCURGUS GARDNER, prominent Russellville physician, died at his home, 1703 West Main. He was a native of Havana, moving to Pottsville at an early age with his parents. He attended medical school at Loyola University, Chicago, after graduating from Pope County schools. He did his internship at Cook County Hospital in Chicago.

Dr. Gardner also was a graduate of a New York eye, ear, nose, and throat school and the Academy of Ophthalmology. He was a member of national, state and county medical societies and was a former president of the Arkansas Medical Association.

DR. R. M. ATKINSON, of Bentonville, died at Bates Memorial Hospital after an illness of about five weeks. Born in Bentonville, Dr. Atkinson was the son of the late Richard and Bertha Funchess Atkinson. He was graduated from Bentonville High School and the Medical College at Cincinnati, Ohio.

He started his medical practice in Bentonville in 1916 and was associated with the late Dr. C. E. Hurley. That association continued until 1931, when Dr. Atkinson set up his own office where he continued his practice up until the time of his last illness.

Always active in the field of medicine, Dr. Atkinson was chief of staff at Bates Memorial Hospital and was city health officer at the time of his death. He had also served as county health officer for more than 30 years.

A member of the International College of Surgeons, Dr. Atkinson was highly instrumental in securing the Bates Memorial Hospital building and assisted with its organization, program, expansion and progress after it was founded.

Dr. Atkinson was a charter member of the Bentonville Rotary Club, a member of the Benton County Medical Society, the Arkansas State Medical Society, and the American Medical Association.

* * *

DR. CHARLES B. BEEBY, well known Huntsville, Arkansas, resident died following a heart attack October 11, 1961. He was a Presbyterian, a graduate of Kansas City College of Medicine and Surgery, a member of the American Medical Association, Arkansas Medical Society, and Secretary of the Madison County Medical Society. He was a member of the American Academy of General Practitioners and had been a practicing physician in Huntsville for 40 years.

He was active in civic groups and was instrumental in the construction of the Huntsville Hospital. He was on the staff of the Eureka Springs hospital.

* * *

DR. A. L. PEACOCK, 91, beloved country doctor and the state's oldest practicing physician, died at the Siloam Springs Hospital after an extended illness. Doctor Peacock had been a resident of Gentry since 1927, moving from Judsonia, Arkansas. He was a native of Strawberry, Arkansas. A graduate of the University of Tennessee Medical School, and Hodges School of Pharmacy, a mem-

ber of the Arkansas Medical Society, and the American Medical Association. He had been a member of the Benton and Lawrence county Medical Associations.

Dr. Peacock was a physician and pharmacist and practiced over 62 years. Up until just the last few years he was on call day or night, but failing health restricted his practice to his office.

+ + + +

ABSTRACTS

Eradication of Poliomyelitis

A. B. Sabin

Ann Intern Med—Vol. 55:353 (Sept.) 1961

An infectious disease can be eradicated when the chain of transmission of the infectious agent is broken. In poliomyelitis the alimentary tract is the primary site for multiplication of the polioviruses, and these viruses maintain themselves by passing with contaminated feces from one susceptible human being to another. Also, following natural infection, resistance to reinfection develops in the alimentary tract, which limits the soil in which the polioviruses multiply. The killed-virus vaccine of Salk provided a tool with which the incidence of the paralytic disease could be reduced, but the immunity thus provided does not prevent multiplication of the viruses in the intestinal tract. The immunity provided by orally administered, live, attenuated poliovirus vaccine not only protects the individual against paralysis but also alters the susceptibility of the intestinal tract to multiplication of the polioviruses. Optimal utilization of oral poliovirus vaccine in the United States would involve 2 phases: (1) community-wide vaccination during the winter and spring months of the largest possible number of persons, regardless of how many doses of Salk vaccine they have had, with special emphasis on preschool children, who are the most important disseminators of the polioviruses, the purpose of this phase being not only to immunize those who are not already immune, but to create enough resistant intestinal tracts to break the chain of transmission and thereby to protect those who failed to receive the vaccine; (2) the continuing vaccination of all children during their first year of life. In oral poliovirus vaccine we now have a tool with which we may attempt to rid populations of poliomyelitis and the viruses which cause it.



PERSONAL AND NEWS ITEMS

Dr. Neblett Opens Offices in Jonesboro

Dr. Donald T. Neblett opened offices for the practice of pediatrics in Jonesboro recently. Dr. Neblett, born at Clarksville, Tennessee and reared at Morristown, Tennessee, did his pre-med work at Carson Newman College and the University of Tennessee. He graduated from the University of Tennessee Medical School in Memphis in 1958 and did his internship at University of Tennessee Memorial and Research Hospital in Knoxville. He then did two years of residency in pediatrics at the same hospital.

* * *

New Taylor Clinic Now Operational

A new clinic has been completed in Taylor. Under the direction of three Taylor businessmen, Taylor's first clinic is now operational. Dr. Oren E. Hake, who began practice there early this summer will be the doctor in charge. He is Taylor's first doctor since the death of Dr. W. H. Horn.

The well appointed building contains an emergency room, a complete laboratory, two treatment rooms, an X-ray room, large lounge or waiting room, a dark room, the doctor's office and a business office. The building measures 1,200 square feet. The three Taylor businessmen responsible for the construction of the clinic were L. A. King, W. R. Stewart and Willie Souter.

* * *

Dr. Bridges Has Brought Needful Medical Service

After about a month of practice, Dr. Olen Bridges' days are growing longer as the patient load grows daily. Dr. Bridges has brought to the Cave City community a different type of medical service to that of the past.

Out of need and necessity Dr. Bridges has equipped his office with X-ray equipment, ultrasonic sound equipment, a diathermic treatment unit, and an electrocardiogram unit. These are

some of the things that have become standard equipment with medical practice of today. Dr. Bridges' two and a half years practice with the Rogers Hospital in Searcy has given him varied experiences in surgery which proves helpful in his practice at Cave City. In the short time he has been there, he has been called to do major surgery for his patients as well as assist other doctors in surgery.

* * *

Tribute to a Doctor

Dr. Joe F. Rushton of Magnolia was recognized for 12 years service on the board of directors of the Arkansas Baptist Hospital in Little Rock, with a dinner held in the hospital dining room.

Dr. Rushton was presented with a plaque "in recognition of his diligence and devotion to the Arkansas Baptist Hospital."

* * *

Dr. Headstream in the News

Doctor James W. Headstream was a guest speaker at a one day Seminar in Urology sponsored by Louisiana State University Post-graduate School of Medicine in Shreveport. Also Dr. Headstream has been selected for membership in the Society for Pediatric Urology. This Society requires original investigation as well as a large portion of practice to be devoted to the care of Urologic problems in children.

* * *

Construction Begins on \$74,000 Clinic

Construction has begun on a new medical clinic for Conway. It is to be located at Locust Avenue and Elm Street and will be erected by Dr. John W. Sneed, Jr., and Dr. Fred Gordy, Jr. The building is to contain more than 5,700 square feet and will cost approximately \$74,000.

The structure will be of Williamsburg architecture, Dr. Gordy said, "and will resemble a residence more than a commercial building." The site is situated on a Conway residential street, but

is in the commercial area. The Conark Builders was awarded the contract for the project.

Dr. Gordy said a pharmacy will be included in the building plans and it will be operated by Bernard Smith and J. S. Rogers, Jr.

* * *

**New Officers of the Arkansas Academy
of General Practice**

New officers of the Arkansas Academy of General Practice have been installed. They are as follows:

President-elect, Dr. Ross Maynard of Pine Bluff.
Secretary-Treasurer, Dr. T. D. Honeycutt of Little Rock.

Vice President, Dr. A. J. Forestiere of Harrisburg.

* * *

Kenneth R. Duzan, M.D., of El Dorado, Arkansas has just completed a successful year as a member of the Advisory Board of the American Association of Medical Assistants.

* * *

Dr. Robins Gives Talk at Rotary

Dr. R. B. Robins spoke to the Rotary Club on world medical problems. He has recently returned from South America where he attended the annual assembly of the World Medical Association, which met in Rio de Janeiro, Brazil. Dr. Robins was one of the four official representatives from the United States. He said the World Medical Association is patterned somewhat after the United Nations and that each country has two votes regardless of the size of the nation. There were representatives at this meeting of 56 nations of the world.

He spoke of the need for an universal language as, he said, difficulty with language causes many misunderstandings among people of the world. At this world meeting there was simultaneous translation of the proceedings in five languages—English, German, French, Spanish, and Portuguese. “All you had to do was to put on a head set and turn the button to the language that you wanted,” he said.

He traveled from New York to Rio in a Rolls Royce Intercontinental Varig Jet plane at 600 miles an hour and the 5,500 mile non-stop flight was made in 9¼ hours.

Dr. Robins stated that he found inflation in Brazil and that one American dollar would obtain

300 cruzeiros, which is the money unit in that country. A few years ago the rate of exchange was 30 cruzeiros for one American Dollar.

He stated that the meeting was divided into a scientific section and a business section. The chief subject discussed was virus infection and the world's leading virologists participated in the program.

* * *

**Medical Assistants’
Educational Program**

The Arkansas State Medical Assistants Society, with the help of the Arkansas Medical Society, has organized an educational program. The courses are arranged and conducted under the supervision of the University of Arkansas, Division of General Extension. The first in a series of courses, Medical Terminology, was completed in Texarkana, Fayetteville, and Magnolia in the spring of 1961. Those completing the course in Texarkana were:

| MEDICAL ASSISTANT | EMPLOYED BY |
|---------------------------------|---|
| Virene Alvis Chaney | Dr. Charles A. Smith, Texarkana |
| Sylvia Jeanette Cox | Dr. Mitchell Young, Texarkana |
| Ella Louise Gibbs | Dr. Willie J. Lee, Stamps |
| Sarah Stauffer Goesl | Dr. Andrew G. Goesl, Texarkana |
| Nell M. Jacobson | Dr. Marvin L. Williams, Texarkana |
| Doris Catherine Jarrell | LaFayette County Hospital,
Lewisville |
| Mildred Louise Johnson | Dr. Richard Brunazzi, Texarkana |
| Beatrice K. Jones | LaFayette County Hospital, Lewisville |
| Tresa B. McAllister | Dr. Charles V. Bintliff, Texarkana |
| Charlotte Ann McCain | Collom and Carney Clinic,
Texarkana |
| Ruth Morehead | Dr. Charles A. Smith, Texarkana |
| Prudie Orr | Student Nurse, Texarkana College, Texarkana |
| Mabel Kirk O'Steen | Dr. Frank P. Cantrell, Texarkana |
| Pauline Rhoden | Smith Clinic, Texarkana |
| Myrlene Franklin Ringgold | Dr. R. W. Pickett, Texarkana |
| Joann Sanders | Dr. Willie J. Lee, Stamps |
| Beulah Leigh Sealy | Dr. Eugene T. Ellison, Texarkana |
| Dorothy Mae Short | Dr. John S. Griffin, Texarkana |
| Betty J. Tipton | Dr. Howard H. Harris, Lewisville |
| Mincola Owen Walker | Dr. R. W. Pickett, Texarkana |
| Patsy Wade | St. Michael's Hospital |
| Ruby Vitura Wilhite | Dr. Eugene T. Ellison, Texarkana |

Those completing the course in Magnolia were:

Instructor: Dr. Kenneth Duzan, El Dorado.

| MEDICAL ASSISTANT | EMPLOYED BY |
|-------------------------|--------------------------------|
| Helen Bain | City Hospital, Magnolia |
| Jean Boyette | Unemployed, El Dorado |
| Brenda Burchfield | City Hospital, Magnolia |
| Iris Cheatham | Wilson Clinic, Magnolia |
| Annette Hamm | Drs. Drewrey & Guthrie, Camden |
| Bonnie Davis | City Hospital, Magnolia |
| Hazel Gill | Dr. Kenneth Duzan, El Dorado |
| Wilda Hawkins | Drs. Drewrey & Guthrie, Camden |

| MEDICAL ASSISTANT | EMPLOYED BY |
|-----------------------------|----------------------------------|
| Dorothy Sue Hollis | Dr. W. H. Pruitt, Camden |
| Louise Inscore | City Hospital, Magnolia |
| Kathleen Kirkpatrick | Dr. John L. Ruff, Magnolia |
| Martha A. McHenry | Dr. R. L. Turnbow, El Dorado |
| Margaret Parker | Dr. John H. Miller, Camden |
| Alliene Peace | Dr. L. V. Ozment, Camden |
| Grace Perdue | Dr. Kenneth Duzan, El Dorado |
| Noveleene Stevens | City Hospital, Magnolia |
| Gloria Terrell | Dr. Paul G. Henley, El Dorado |
| Ester Trull | Warner Brown Hospital, El Dorado |
| Lorena Welty | Dr. George W. Warren, Smackover |
| Frances Widmer | Dr. George W. Warren, Smackover |
| Mary Frances Williams | Dr. J. Frank Clark, El Dorado |

Those completing the course in Fayetteville were:

| MEDICAL ASSISTANT | EMPLOYED BY |
|-----------------------------|--|
| Wanda Sue Allen | Mock Clinic, Prairie Grove |
| Emma Jean Bledsoe | Veterans Hospital, Fayetteville |
| Virginia L. Burton | Veterans Hospital, Fayetteville |
| Mary Elizabeth Henson | Dr. George Harrison Butler, Fayetteville |
| Maurice B. Jones | Dr. Howell E. Leming, Fayetteville |
| Daryl C. Land | ANL Medical Laboratory |
| Lorena Leming | Dr. Howell E. Leming, Fayetteville |
| Mildred M. McGaugh | City Administration, Fayetteville |
| Jane R. McKimney | Student at U of A, Fayetteville |
| Joan Morris | Dr. LeMon Clark, Fayetteville |
| Inez N. Powell | ANL Laboratory |
| Deany Reid | Dr. James Mashburn, Fayetteville |
| Stella Sitton | Dr. Donald Baker, Fayetteville |
| Veda M. Tassey | Dr. Stanley Applegate, Springdale |
| Claudia Thornsberry | Sisco Clinic, Springdale |
| Agatha Lee Utley | Student at U of A, Fayetteville |
| Wilma Wanda Wendt | Dr. W. A. Fowler, Fayetteville |

The same course has recently started under the direction of the University at Fort Smith Junior College and the following Medical Assistants have enrolled:

Instructor: Dr. William Stanton, Fort Smith.

| MEDICAL ASSISTANT | EMPLOYED BY |
|--------------------------|---|
| Zoe Ellen Cobb | Dr. H. W. Savery, Van Buren |
| Lucille Daily | Dr. William Stanton, Fort Smith |
| Betty June Doke | Dr. William Stanton, Fort Smith |
| Dorothy Dalmut | Dr. Wm. Merle Woods, Huntington |
| Janell Darneal | Arkansas Medical Society, Fort Smith |
| Wanda C. Davis | Drs. Kelsey & Sherman, Fort Smith |
| Mary Nell Euper | Drs. Moulton, Lane & McEwen, Fort Smith |
| Kathryn Fine | Arkansas Medical Society, Fort Smith |
| Mardell Finsel | Dr. George W. Allen, Fort Smith |
| Ernestine Fontenot | Paris Hospital, Paris |
| Winnie Halliburton | Dr. Harley C. Darnall, Fort Smith |
| Helen R. Hallum | Dr. J. P. Shermer, Fort Smith |
| Roxie Kunz | Drs. Kelsey and Sherman, Fort Smith |
| Freda Lux | Drs. Moulton, Lane & McEwen, Fort Smith |
| Johnnie R. Murphy | Dr. Robert J. Thompson, Fort Smith |
| G. Quaile | Paris Hospital, Paris |
| Leah Richmond | Arkansas Medical Society, Fort Smith |
| Ruth Rippy | Fort Smith Health Center, Fort Smith |
| Jesse Stephens | Drs. Moulton, Lane & McEwen, Fort Smith |
| Marian Todd | Arkansas Medical Society, Fort Smith |
| Frances Vaughan | Dr. Thomas P. Foltz, Fort Smith |
| Melba West | Dr. W. R. Brooksher, Fort Smith |
| Myrtle Snider | Holt-Krock Clinic, Fort Smith |

It is reported that a course will soon be started in Little Rock. The second course, in Anatomy and Physiology, was started in Fayetteville on November 6th under the tutelage of Dr. Art Moore of Fayetteville. The course in Anatomy and Physiology was begun in Texarkana on November 16th with Mr. Willard Pyle, science instructor at Texarkana Junior College, teaching the course. It is contemplated that the courses will be continued to completion of a curriculum approved for recognition by the American Association of Medical Assistants and the American Medical Association. While the courses are sponsored by the Medical Assistants and the Medical Society, anyone interested in preparing themselves for a career in this work may enroll.



PROCEEDINGS OF SOCIETIES

Dr. John McCollough Smith Is Speaker

Dr. John McCollough Smith, president-elect of the Pulaski County Medical Society, was the guest speaker at a meeting of the Optimist Club of Pulaski Heights in the Cammack Village Hall. Dr. Smith's subject was "Words Fail Me—An Adventure in Semantics."

* * *

Technicians Have Convention in Texarkana

X-Ray technicians from four states were in Texarkana for the 13th Annual Convention of the Arkansas Society of X-Ray Technicians at the Holiday Inn. The convention began with a refresher course on the radiography of the skull and sinuses with Reed Gilliam, R.T. of St. Francis Hospital at Tulsa, Oklahoma as the instructor.

Dr. W. D. Dawson, Texarkana surgeon was the speaker at the luncheon at which awards were presented. William Means of Red River Arsenal was the speaker at the banquet. The banquet was preceded by a social hour and followed by a dance.

Others on the program were Dr. Joe B. Norton of Little Rock, president of the Arkansas Radiological Society, Dr. Jack S. Krohmer, M.A., Dr. Betty Ann Lowe and Elizabeth Perkins of Texarkana, Mary Jo Stuckey, Anna Grace Coley, Cassandra Evans of Fort Smith, Roy Bragg of Texarkana, Ira Lee Cundeff, R.T. of Indianapolis, and Jenny Simms of Little Rock.

* * *

Ouachita County Medical Society

The Ouachita County Medical Society met in dinner session at the Camden Hotel. Dr. Paul Henley of El Dorado, Arkansas spoke on "Medical Discipline." Dr. Henley served for several years on the special committee of the American Medical

Association considering problems in medical discipline.

* * *

Medical Assistants Have Benefit Party

The Union County Medical Assistants Society had a benefit party at the TAC House. Proceeds from this event were used by the society for its Christmas program for underprivileged school children. The party was open to the general public with tickets sold by members of the group. Plans for the party were handled by the ways and means committee of which Miss Bess Kennedy was chairman.

* * *

Contributors to the American Medical Education Foundation From the State of Arkansas During October 1961:

| | |
|---|----------|
| Cazort-Johnston Allergy Clinic, Little Rock | \$ 25.00 |
| Dr. George J. Fotioo, Hot Springs | 5.00 |
| Dr. James H. French, Hot Springs | 50.00 |
| Dr. Thomas T. Frost, North Little Rock | 5.00 |
| Dr. Anthony Grasse, Calico Rock | 100.00 |
| Dr. Caldeen Gunter, Siloam Springs | 25.00 |
| Dr. James D. Huskins, Siloam Springs | 25.00 |
| Dr. Julius Hellums, Dumas | 10.00 |
| Dr. Morris Jackson, Little Rock | 25.00 |
| Dr. John Kirkley, Jonesboro | 25.00 |
| Dr. F. M. Lockwood, Fort Smith | 5.00 |
| Dr. Jimmie Lytle, Batesville | 25.00 |
| Dr. J. S. McKinney, El Dorado | 25.00 |
| Dr. L. H. McDaniel, Tyroneza | 10.00 |
| Dr. Robert Matthews, Little Rock | 5.00 |
| Dr. Sanford Monroe, Pine Bluff | 25.00 |
| Dr. Billy J. Puckett, Siloam Springs | 25.00 |
| Dr. Arthur Rosenthal, North Little Rock | 5.00 |
| Dr. Francis J. Scully, Hot Springs | 5.00 |
| Dr. F. Sisco, Springdale | 5.00 |
| Dr. L. H. Siegel, Fayetteville | 25.00 |
| Dr. Melvin Shatavsky, Little Rock | 5.00 |
| <hr/> | |
| \$460.00 | |



Sevier-Polk Medical Auxiliary Met

The Sevier-Polk County Medical Auxiliary held its annual fall meeting in Mena. Following a luncheon at Joe's Steak House, the business meeting was held at the home of Mrs. Pierre Redman, President.

New officers were elected for two-year terms and will be installed at the spring meeting to be held in DeQueen. The new president is Mrs. Charles Jones of DeQueen, and Mrs. Flo Pullen of DeQueen was elected secretary-treasurer to succeed Mrs. John Wood of Mena.

Those attending were Mrs. R. C. Dickinson of Horatio and Mrs. Roger Dickinson of De Queen. Those from Mena were Mrs. Redman, Mrs. Wood and Mrs. Calvin Austin.

ANSWER—What Is Your Diagnosis?

25 YEAR OLD WHITE MALE

Enlargement of the hands and 40 lb. weight gain over a four year period. There was some visual difficulty, muscle weakness, and polyphagia. Frontal headaches were troublesome. Physical examination showed spade-like hands and feet, permanent costochondral junctions, and prognathism.

DIAGNOSIS: Acromegaly.

X-RAY FEATURES: There is thickening of the diploe of the skull and a very large sella turcica with depression of the floor and thinned posterior clinoid processes. The frontal sinuses are very large. There are bony proliferative changes about the ends of the phalanges and slightly along the medial aspect of the ends of both radii with overgrowth of surrounding soft tissues, especially about the fingers. The changes are characteristic of acromegaly.

Mrs. Files Hostess to Auxiliary

Mrs. James B. Files was hostess to members of Mississippi County Medical Auxiliary in her home with Mrs. Lloyd Godley as co-hostess. This was the third meeting of the season.

Mrs. C. D. Whigham of Blytheville Air Force Base was hostess to the September meeting at which time Mrs. Edward Taylor resigned as president. Her vacancy was filled by Mrs. Cecil Holcomb. At a later meeting Mrs. Joann Taylor of Leachville was elected parliamentarian. Mrs. Merrill Osborne was appointed mental health chairman, and Mrs. Files, chairman of recruitments for medical careers.

The program was presented by Mrs. Hershel Wilmoth, State Medical Auxiliary president, who spoke on "Socialized Medicine."



BOOK REVIEWS

CARDIOVASCULAR DYNAMICS. Second Edition, illustrated. An extensive revision, enlargement and reorganization of a book originally published under the title Cardiac Diagnosis: A Physiologic Approach. By Robert F. Rushmer, M.D., Professor of Physiology and Biophysics, University of Washington Medical School. Published by W. B. Saunders Company, Philadelphia and London, 1961.

This book discusses the physiology of the circulatory system and is a well integrated volume. The book consists largely of normal physiology, but there is also some discussion of abnormal physiology. For example, the book discusses such things as cardiac output and the factors affecting it. There is a review of peripheral vascular control. The effects of posture on circulation are presented. There is a chapter on cardiac reserve and compensated heart disease. The book is fairly well illustrated and there are excellent references. The book does not and cannot make any pretense to being encyclopedic, but is reasonably complete in spite of its condensation; there are 503 pages. This book is recommended to medical students and to graduate physicians interested in studying the fields of cardiovascular disease. AK

OUTLINE OF PATHOLOGY, by John H. Manhold, Jr., D.M.D., M.A., F.A.C.D. Professor and director of Oral

Diagnosis and Pathology for the College of Dentistry, Seton Hall College of Medicine and Dentistry; Attending Pathologist, Jersey City Medical Center. Theodore E. Bolden, D.D.S., M.S., Ph.D., Assistant Professor of Oral Diagnosis and Pathology, College of Dentistry, Seton Hall College of Medicine and Dentistry; Attending Pathologist, Jersey City Medical Center. Published by W. B. Saunders Company, 1960, pp 340.

This text book is really a hand book. It is small enough to be carried in the pocket. It outlines as thoroughly as one could in a small book, basic facts about pathology. Because of the limited space, it is obviously extremely brief. Nevertheless, because of the small size of the book it probably is of value to medical students on rounds and possibly it is of some value to interns. It has no merit to anyone at a graduate level. This is recommended only as a handbook for medical students and interns making rounds. AK

REVIEW OF MEDICAL MICROBIOLOGY, by Ernest Jawetz, Ph.D., M.D., Professor of Microbiology and Lecturer in Medicine and Pediatrics, University of California School of Medicine, San Francisco, Joseph L. Melnick, Ph.D., Professor of Virology and Epidemiology, Baylor University College of Medicine, Houston, Texas, and Edward A. Adelberg, Ph.D., Associate Professor of Bacteriology and Chairman, Department of Bacteriology, University of California, Berkeley, Fourth Edition, Illustrated, pp. 376, published by Lange Medical Publications, Los Altos, California, 1960.

This is an exceptionally well written book which is published in outline form. Progress in microbiology has been particularly rapid in the past 15 years. This textbook summarizes much of our basic knowledge in this field. There is an excellent chapter on antimicrobial therapy. It discusses host-parasite relationship and briefly discusses most

of the currently used antibiotic drugs. There are excellent discussions of different bacteria, fungi and viruses. The book has a large number of illustrations and charts. It is written by well-known authorities. This text is heartily recommended as a handbook of microbiology. AK

ANSWER — ELECTROCARDIOGRAM OF THE MONTH

RATE: 194 Rhythm: Nodal Tachycardia

PR: —sec. QRS: .05 sec. QT: .24 sec.

INTERPRETATION: P waves, abnormal direction. Occur at the end of QRS. Abnormal RS-T depression. A-V nodal tachycardia. Ischemia. COMMENT:

This patient had a history of attacks of rapid heart action and prior to surgical operation was found to have another attack. No heart disease was present and no complications incident to her cardiovascular system occurred. The tracing is rather characteristic of supraventricular tachycardia with evidence of focus in the vicinity of the A-V node with retrograde depolarization of the atria. The attack subsided upon performance of a Valsalva maneuver. The patient then volunteered that she had learned that self-induced vomiting previously had caused cessation of her attacks, as is frequently found.

ABSTRACTS

New Concepts in Primary Hyperparathyroidism—

E. A. Hanna

Amer Surg—Vol. 27:585 (Aug.) 1961

The author reports on 51 patients with primary hyperparathyroidism seen between 1948 and 1959 in all hospitals in Houston, Tex. Four clinical types of primary hyperparathyroidism were observed, the pure renal, the pure skeletal, the mixed, and the incidental types. Duration and severity of the disease, the patient's age, sex, activity, diet, and previous disease of the skeletal or renal systems determine the clinical picture. The clinical findings are the product of calcium metabolism in the body with primary changes in bone and secondary changes in the kidneys. This concept is in line with that proposed in the most recent investigations. The commonly used tests

for screening patients with possible primary hyperparathyroidism are the determinations of serum calcium, serum phosphorus, and serum alkaline phosphatase levels. Determination of the serum calcium level is the most diagnostic aid. When the values of total serum calcium, ionic serum calcium and diffusible serum calcium are compared in the screening of patients, diffusible serum calcium is found the most reliable. A new and a practical method is suggested for estimating the diffusible serum calcium level. Parathyroid adenomas may be microscopic in size and may be difficult to recognize during surgical exploration. A policy of identifying 3 or more parathyroid glands during the surgical procedure is very helpful, and may be the only means of detecting such microscopic adenomas.



CLASSIFICATION OF PULMONARY TUBERCULOSIS

A new edition of Diagnostic Standards and Classification of Tuberculosis—the eleventh—redefines the terms to be used in primary and reinfection disease.

No single system of classification can give information which completely describes the lesions of tuberculosis. However, certain basic categories are needed for records and for statistical purposes. There are also optional classifications which may be used for a comparison of disease characteristics and which may include general status of the patient, pathologic character of lesions, detailed location of lesions, pathogenic status, mode of dissemination, dynamic status, duration of disease, and previous treatment.

The basic classifications should include the following: extent of disease, status of clinical activity, therapeutic status, and exercise status.

EXTENT OF DISEASE. The total extent and location of pulmonary lesions are decided from examination of chest roentgenograms.

Minimal lesions include those of slight to moderate density without demonstrable cavitation. They may involve a small part of one or both lungs, but the total extent should not exceed the volume of lung present above the second chondrosternal junction and the spine of the fourth or the body of the fifth thoracic vertebra on one side. The term minimal is not to be interpreted as minimizing the activity or hazards of the disease in this stage.

Moderately advanced lesions may be in one or both lungs, but the total extent should not exceed the following limits: disseminated lesions

of slight to moderate density extending throughout the total volume of one lung or the equivalent in both lungs; dense and confluent lesions limited to one third the volume of one lung; if cavitation is present, its total diameter must be less than 4 cm.

Far advanced lesions are all those more extensive than moderately advanced.

Both original extent of disease and change in extent must be noted.

STATUS OF CLINICAL ACTIVITY. The activity of pulmonary tuberculosis is based largely on roentgenographic and bacteriologic factors and their duration. Determination of bacteriologic status must include the use of sputum concentrates, cultures, and animal inoculations, or similar tests of gastric aspirates or lavages. A positive bacteriologic finding means the presence of tubercle bacilli by microscopy of sputum specimens, preferably confirmed by culture or guinea pig inoculation. Susceptibility studies should be made for the major antituberculosis drugs whenever possible.

Roentgenographic status should be determined by serial posteroanterior films, where feasible, by planigrams and other supplementary films.

Active pulmonary tuberculosis may be so classified on the basis of one or more of the following criteria:

If the probability of change is obvious on a single chest roentgenogram or if change for better or worse is demonstrable on serial roentgenograms at intervals of 6 months or less.

If tubercle bacilli can be demonstrated in the sputum, gastric aspirates or tracheal aspirates.

If such complications as tuberculous empyema, bronchial or pleural fistula, or active endobronchial tuberculosis are present, the associ-

Diagnostic Standards and Classification of Tuberculosis, 1961 edition, published by the National Tuberculosis Association.



BULK IS BASIC

in treating constipation of pregnancy

METAMUCIL®

corrects constipation without irritation

"Pregnancy and menstruation¹ are contraindications to the use of the stronger cathartics, since the hyperemia may lead to abortion or excessive menstrual flow."

Metamucil, with its soft, mucilloid bulk, mixes with the intestinal contents and exerts gentle pressure on the intestinal musculature to stimulate normal peristalsis.

In pregnant patients, this natural stimulus strengthens the response of the musculature, reinforces the defecatory reflex in the rectum and, in all but rare instances, resort to colonic irritants becomes unnecessary.

Together with proper dietary management and attention to regularity, mild encouragement to regular evacuation which nearly all pregnant patients require is possible with nonhabit-forming Metamucil.

Metamucil is available as Metamucil powder in containers of 4, 8 and 16 ounces, and as lemon-flavored Instant Mix Metamucil in cartons of 16 and 30 single-dose packets.

1. Sollmann, T.: A Manual of Pharmacology and Its Applications to Therapeutics and Toxicology, ed. 8, Philadelphia, W. B. Saunders Company, 1957, p. 206.

METAMUCIL®

brand of psyllium hydrophilic mucilloid

G. D. SEARLE & CO.

CHICAGO 80, ILLINOIS

Research in the Service of Medicine

ated pulmonary tuberculosis must be classified as active even if other criteria are not apparent.

Duration of activity should be designated if known. The terms "improved," "unimproved," or "worse" may be added to "active" after an interval of observation.

Quiescent is a newly reinstated term to be applied to a class intermediate between active and inactive. It denotes negative bacteriologic findings (a negative bacteriologic finding means that adequate examinations have been made to exclude the presence of tubercle bacilli) on monthly examinations for at least six months and stable or slowly improving lesions visible by roentgenography, although cavitation may be present. The "open-negative" is in this category.

Inactive denotes constant and definite healing. Bacteriology must have been negative on monthly examinations for at least six months by all methods used. Serial roentgenograms must show stability and no evidence of cavitation for at least six months.

Tuberculosis may be temporary classified as *activity undetermined* if adequate bacteriologic and roentgenographic examinations have not been completed, or if observation has been too brief.

THERAPEUTIC STATUS. Chemotherapy and surgical collapse or excision, when used, should be added to the terms applied to clinical status.

EXERCISE STATUS. The amount of exercise pre-

scribed should be designated as: I. Bed rest (varies from strict immobilization to bathroom privileges). II. Semi-ambulatory (rest and exercise combined). III. Ambulatory (a greater amount of exercise). IV. Ordinary living conditions (the amount of exercise equals full activities of home life and work).

PRIMARY TUBERCULOSIS

The basic features of primary tuberculosis should include data on tuberculin tests, bacteriologic data, roentgenographic findings, symptoms, and extrapulmonary tuberculosis.

CLASSIFICATION. Primary tuberculosis may be classified as to extent of lung lesions and status of activity. The extent is classified the same as for reinfection tuberculosis. Activity is classified as follows:

Active—A positive tuberculin reaction plus one or more of the following: tubercle bacilli in the bronchial secretions or gastric contents; roentgenographic evidence of activity in a parenchymal, pleural, or lymph node lesion. Tuberculin reactors less than 36 months of age or those of any age who have converted from nonreactors to reactors within the previous years are often treated as active primary tuberculosis even in the absence of other evidence of activity, but should not be reported as active primary tuberculosis.

Inactive—Absence of criteria of activity.

Undetermined—No classification with respect to activity can be made due to lack of data.

THE JOURNAL OF THE *Arkansas* MEDICAL SOCIETY

February, 1962

Vol. 58 No. 9

FORT SMITH

U.S. POST OFFICE PERMIT NO. 100

EST. 1912

San Francisco, 22

86th ANNUAL
ARKANSAS MEDICAL SOCIETY

HOT SPRINGS

APRIL 29—MAY 2, 1962

Efficacy of propionyl erythromycin and its lauryl sulfate salt in 803 patients with common bacterial respiratory infections.

Tonsillitis*
92.3%
235 patients

Acute Streptococcus Pharyngitis*
88.3%
317 patients

Bronchitis* (Bacterial Complications)
95.3%
85 patients

Pneumonia*
88.6%
166 patients

*References available on request.

The usual dosage for infants and children under twenty-five pounds is 5 mg. per pound every six hours; for children twenty-five to fifty pounds, 125 mg. every six hours. For adults and children over fifty pounds, the usual dosage is 250 mg. every six hours. In more severe or deep-seated infections, these dosages may be doubled.

Available as: Pulvules®—125 and 250 mg. †; Oral Suspension—125 mg. † per 5-cc. teaspoonful; and Drops—5 mg. † per drop.

This is a reminder advertisement. For adequate information for use, please consult manufacturer's literature. Eli Lilly and Company, Indianapolis 6, Indiana.

Ilosone® (erythromycin estolate, Lilly) (propionyl erythromycin ester lauryl sulfate)

†Base equivalent

Ilosone®
works
to
speed
recovery



232539

when urinary
tract
infections
present
a therapeutic
challenge...

CHLOROMYCETIN®

(chloramphenicol, Parke-Davis)

Often recurrent...often resistant to treatment, urinary tract infections are among the most frequent and troublesome types of infections seen in clinical practice.^{1,2} In such infections, successful therapy is usually dependent on identification and susceptibility testing of invading organisms, administration of appropriate antibacterial agents, and correction of obstruction or other underlying pathology.

Of these agents, one author reports: "Chloramphenicol still has the widest and most effective activity range against infections of the urinary tract. It is particularly useful against the coliform group, certain *Proteus* species, the micrococci and the enterococci."¹ CHLOROMYCETIN is of particular value in the management of urinary tract infections caused by *Escherichia coli* and *Aerobacter aerogenes*.³ In addition to these clinical findings, the wide antibacterial range of CHLOROMYCETIN continues to be confirmed by recent *in vitro* studies.⁴⁻⁶

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals® of 250 mg., in bottles of 16 and 100. See package insert for details of administration and dosage.

Warning: Serious and even fatal blood dyscrasias (aplastic anemia, hypoplastic anemia, thrombocytopenia, granulocytopenia) are known to occur after the administration of chloramphenicol. Blood dyscrasias have occurred after both short-term and prolonged therapy with this drug. Bearing in mind the possibility that such reactions may occur, chloramphenicol should be used only for serious infections caused by organisms which are susceptible to its antibacterial effects. Chloramphenicol should not be used when other less potentially dangerous agents will be effective, or in the treatment of trivial infections, such as colds, influenza, or viral infections of the throat, or as a prophylactic agent. **Precautions:** It is essential that adequate blood studies be made during treatment with the drug. While blood studies may detect early peripheral blood changes, such as leukopenia or granulocytopenia, before they become irreversible, such studies cannot be relied upon to detect bone marrow depression prior to development of aplastic anemia.

References: (1) Malone, F. J., Jr.: *Mil. Med.* 125:836, 1960. (2) Martin, W. J.; Nichols, D. R., & Cook, E. N.: *Proc. Staff Meet. Mayo Clin.* 34:187, 1959. (3) Ullman, A.: *Delaware M. J.* 32:97, 1960. (4) Petersdorf, R. G.; Hook, E. W.; Curtin, J. A., & Grossberg, S. E.: *Bull. Johns Hopkins Hosp.* 108:48, 1961. (5) Jolliff, C. R.; Engelhard, W. E.; Ohlsen, J. R.; Heidrick, P. J., & Cain, J. A.: *Antibiotics & Chemother.* 10: 694, 1960. (6) Lind, H. E.: *Am. J. Proctol.* 11:392, 1960.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan



THE
JOURNAL OF THE

Arkansas

MEDICAL SOCIETY

Owned by

THE ARKANSAS MEDICAL SOCIETY

And Published Under Direction of the Council

ALFRED KAHN, JR., M.D., Editor

1300 West Sixth Street Little Rock, Arkansas

MR. PAUL C. SCHAEFER, Business Manager

218 Kelley Bldg. Fort Smith, Arkansas

LITTLE ROCK BUSINESS OFFICE

114 E. Second St. Little Rock, Arkansas

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY

| | |
|---|---------------|
| WM. A. SNODGRASS, JR.,—President..... | Little Rock |
| H. KING WADE, JR., President-Elect..... | Hot Springs |
| M. E. BLANTON, First Vice-President..... | Jonesboro |
| CHARLES W. REID, Second Vice-President..... | Pine Bluff |
| L. E. DREWREY, Third Vice-President..... | Camden |
| H. ELVIN SHUFFIELD, Secretary..... | Little Rock |
| W. R. BROOKSHER, Secretary Emeritus..... | Fort Smith |
| BEN N. SALTZMAN, Treasurer..... | Mountain Home |
| C. LEWIS HYATT, Speaker, House of Delegates, Monticello | |
| J. P. PRICE, JR., Vice Speaker, | |
| House of Delegates..... | Monticello |
| MR. PAUL C. SCHAEFER, Executive Secretary, | |
| P. O. Box 1345..... | Fort Smith |

COUNCILORS

| | | |
|------------------|------------------------|-------------|
| First District | JOE VERSER..... | Harrisburg |
| | ELDON FAIRLEY..... | Osceola |
| Second District | HUGH R. EDWARDS..... | Searcy |
| | PAUL GRAY..... | Batesville |
| Third District | K. E. BEATON..... | Wynne |
| | PAUL MILLAR..... | Stuttgart |
| Fourth District | H. W. THOMAS..... | Dermott |
| | T. E. TOWNSEND..... | Pine Bluff |
| Fifth District | J. L. DEDMAN..... | Camden |
| | GEORGE C. BURTON..... | El Dorado |
| Sixth District | JOHN P. WOOD..... | Mena |
| | KARLTON H. KEMP..... | Texarkana |
| Seventh District | MARTIN EISELE..... | Hot Springs |
| | J. W. KENNEDY..... | Arkadelphia |
| Eighth District | ROBERT D. JONES..... | Little Rock |
| | BILL DAVE STEWART..... | Little Rock |
| Ninth District | ROSS FOWLER..... | Harrison |
| | STANLEY APPEGATE..... | Springdale |
| Tenth District | L. A. WHITTAKER..... | Fort Smith |
| | C. C. LONG..... | Ozark |

The Advertising policy of this JOURNAL is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

EXCLUSIVE PUBLICATION—Articles are accepted for publication on the condition that they are contributed solely to this JOURNAL.

COPYRIGHT 1962—By the JOURNAL of the Arkansas Medical Society.

NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to the membership.

SCIENTIFIC ARTICLES

The Short-Esophagus Type of
Esophageal Hiatal Hernia 357
Herbert W. Schmidt, M.D.

Management of Medical Complica-
tions of Pregnancy..... 361
Stewart A. Fish, M.D.

Renal Hypertension 367
Ralph A. Downs, M.D.

WHAT'S NEW

Mechanical Treatment of Heart
Block..... 370
Frederick B. Berry, M.D.

TEACHING SEMINAR

Digitalis Toxicity 372
Robert T. Bulloch, M.D.

FEATURES

| | |
|-------------------------------------|-----|
| Electrocardiogram of the Month..... | 379 |
| What Is Your Diagnosis?..... | 380 |
| Public Health at a Glance..... | 381 |
| Resolutions..... | 383 |
| Editorial..... | 384 |
| Medicine in the News..... | 386 |
| Things to Come..... | 395 |
| Obituary..... | 397 |
| Personal and News Items..... | 398 |
| Proceedings of Societies..... | 399 |
| Women's Auxiliary..... | 400 |
| Book Reviews..... | 400 |
| Tuberculosis Abstracts..... | 401 |

Notice on Form 3579-P to be sent to Arkansas Medical Society, 218 Kelley Building, Fort Smith, Arkansas. Published monthly under direction of the Council, Arkansas Medical Society Vol. 58, No. 9. Subscriptions \$3.00 a year. Single copies 50 cents. Entered as a second class matter, May 1, 1955, at the post office at Little Rock, Arkansas, under the Act of Congress of March, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 1, 1918. Second-class postage paid at Little Rock, Arkansas.

THE SHORT-ESOPHAGUS TYPE OF ESOPHAGEAL HIATAL HERNIA

Herbert W. Schmidt, M.D.

Mayo Clinic and Mayo Foundation*
Rochester, Minnesota

THE TERM "short-esophagus type of esophageal hiatal hernia" describes a pathologico-anatomic state in which the esophagus is noticeably shortened and the infradiaphragmatic portion of the esophagus and usually a small or large portion of the stomach are observed to have entered the thorax through the esophageal hiatus of the diaphragm. It is, therefore, a syndrome consisting of two elements: (1) an observable reduction in length of the esophagus and (2) a displacement of abdominal structure into the thorax via the esophageal hiatus. Both elements are, of course, known to develop and persist independently.

Instances of short esophagus with and possibly without hiatal hernia have been described as congenital malformations. Such phenomena are rarely encountered. Unless observed in the very early days of postnatal life, the congenital basis of the syndrome is difficult to prove. Nowadays, demonstrable reduction in length of the esophagus with hiatal hernia occurring in youths and adults is generally assumed to be an acquired abnormality.

*The Mayo Foundation, Rochester, Minnesota, is a part of the Graduate School of the University of Minnesota.

Cause and effect are often confused when considering the pathogenesis of this syndrome. In practice the two components, short esophagus and esophageal hiatal hernia, are observed as accomplished facts. Really convincing observations on the transition to this state from that of the esophagus of standard length and the stomach in its presumably normal subdiaphragmatic position are seldom, if ever, recorded. At least some of the steps in the transition remain largely matters of inference; when generalizing, the reasoning is logical and often compelling, but when confronted with the syndrome in one patient, it is often difficult to say which of the two elements developed first. It is almost certain that they did not arise contemporaneously.

The short-esophagus type of esophageal hiatal hernia usually develops as a result of chronic esophagitis of the lower portion of the esophagus. The most common cause of chronic esophagitis is the situation created by the sliding type of esophageal hiatal hernia. Thus, when such a hernia is present, displacement of the esophago-gastric junction into the thorax causes incompetency of the cardia, which allows regurgitation of

acid gastric or alkaline duodenal contents. These secretions are capable of causing a chemical burn in the lower part of the esophagus. If this is allowed to exist long enough, ulceration on the esophageal side of the esophagogastric junction may occur, as well as proliferation of fibrous connective tissue in the muscular coats of the esophagus. This proliferation is capable of (1) shortening the esophagus and (2) producing a stricture at the esophagogastric junction. The end result is thus a triad of complications: (1) ulceration and (2) stricture on the esophageal side of the esophagogastric junction and (3) shortening of the esophagus. Only a few people (less than 10 per cent) who have the sliding type of esophageal hiatal hernia experience these complications.

Prolonged or recurrent vomiting is also capable of producing these complications. When the complications occur as a result of vomiting, however, the stricture that forms usually is long and involves the lower half of the esophagus. Such a stricture is usually very dense and difficult to dilate.

Operative procedures that destroy the mechanism of the gastric cardia may cause regurgitation of acid gastric and alkaline duodenal contents and produce esophagitis severe enough to bring about these same complications. The Wendel type of cardioplasty and the Grondahl type of esophagogastrostomy are two such operations, which formerly were done to relieve obstruction due to cardiospasm. These operations relieved the obstruction temporarily but were followed in a high percentage of cases by ulceration at the esophagogastric junction. Esophagogastrectomy also destroys the sphincteric mechanism at the esophagogastric junction and is responsible for free regurgitation of gastric contents into the lower part of the esophagus. These procedures should not be performed for cardiospasm.

Regurgitant esophagitis may occur in newborn infants. Here again, incompetency of the cardia and the factors related to it seem to be the most common cause. Some children are born with a short esophagus. These conditions, however, are relatively rare.

Regurgitation of gastric or duodenal contents occurs chiefly at night, during recumbency, or when excessive pressure is applied to the anterior abdominal wall. Obesity causes increased intra-

abdominal pressure and thus aggravates the symptoms due to an incompetent cardia. Patients who have cardiospasm have retention of secretion, which produces esophagitis, and at times the esophagitis is severe enough to cause the complications previously mentioned. Scleroderma is a condition that at times involves the esophageal wall in such a manner as to shorten the esophagus and produce a short-esophagus type of esophageal hiatal hernia.

Symptoms

The symptoms of the short-esophagus type of esophageal hiatal hernia are usually those of an incompetent cardia, namely (1) retrosternal burning that is aggravated by lying down or by applying pressure to the anterior abdominal wall, (2) regurgitation of acid gastric juice into the mouth during recumbency and (3) dysphagia, particularly for solid foods, if a stricture is present. If the stricture is dense and is greatly contracted, there will be marked difficulty in swallowing, even of liquids.

Hemorrhage occurs relatively frequently because regurgitant ulceration in the lower part of the esophagus is commonly associated with the hernia. At times the hemorrhage may be very severe, requiring multiple transfusions. Rarely, it may prove to be fatal because of erosion into the smaller arteries of the distal part of the esophagus.

Most people with esophageal hiatal hernia are aerophagic; thus they have epigastric pain which may extend to the left upper portion of the abdomen. This distress is usually relieved by belching.

Certain patients have both duodenal ulcer and the short-esophagus type of esophageal hiatal hernia. These patients have typical symptoms of ulcer as well as symptoms of an incompetent cardia.

Diagnosis

The history is extremely important, since from it one usually can suspect the diagnosis. A short-esophagus type of esophageal hiatal hernia may be suspected in an obese person past the age of 40 who states that he has a retrosternal burning pain that is aggravated by recumbency, by stooping or by wearing tight garments. This same person may say that he has noticed sticking of solid foods in the lower part of the esophagus.

ROENTGENOLOGIC DIAGNOSIS.—Usually, the roentgenologic picture is typical, there being a stricture at the esophagogastric junction with a small amount of stomach present within the thoracic cage. The stricture is usually short unless it is secondary to vomiting, in which event it may involve the lower half of the esophagus. At times, however, the diagnosis is very difficult to make, as the observer cannot be certain whether he is dealing with a normal esophageal ampulla or an actual herniation of the stomach into the thoracic cage. During roentgenologic study of the esophagus and stomach, one should always determine whether or not there is competency at the cardia. This can be done by placing the patient in the Trendelenburg position and creating pressure on the anterior abdominal wall.

ESOPHAGOSCOPY.—It is sometimes difficult to establish at the time of esophagoscopy examination whether or not the esophagus is shortened. The esophagogastric junction in the human being is not always well demarcated. Esophageal mucous membrane usually is a lighter red than gastric mucous membrane. When one introduces the esophagoscope into the stomach in a normal person, it is necessary to overcome a certain amount of resistance at the cardia. One must direct the instrument to the left and anteriorly before entering the stomach. If an esophageal hiatal hernia is present, it is very easy to enter the stomach and no resistance is felt when the esophagogastric junction is passed. Usually, gastric rugae are encountered on the gastric side of the esophagogastric junction, but at times there may be mucosal folds in the lower part of the esophagus that look very much like gastric rugae. In a doubtful situation such as this, it is advisable to take a small biopsy specimen above the level of the diaphragm to determine whether this is gastric or esophageal mucous membrane.

If there is a short esophagus with herniation of the stomach as well as ulcer and stricture formation at the esophagogastric junction, the diagnosis is usually easily made. Typically, one encounters ulceration that runs in the longitudinal direction of the esophagus. The ulceration is usually found to be most intense on the posterior wall of the esophagus. It may have a deep red base or it may be covered with a white exudate. These ulcers are apt to bleed very easily. It is advisable always to take a biopsy specimen from

such a lesion to make sure that it is benign, for at times a carcinoma occurring at the esophagogastric junction is capable of shortening the esophagus and producing a small diaphragmatic hernia.

Treatment

The most important aspect of treatment is the prevention of recurrent esophagitis. A patient with a sliding type of esophageal hiatal hernia who shows signs of esophagitis should have early repair of the hernia. Problems of vomiting should be cared for early. Patients who are guilty of functional vomiting should be warned about the hazard of developing esophagitis and its complications. Vomiting due to pregnancy or postoperative states should be relieved as rapidly as possible. If vomiting occurs secondary to an obstructing duodenal ulcer, surgical relief of the obstruction should be given at an early date. In general, one should try to avoid doing an esophagogastric resection for benign lesions of the lower part of the esophagus such as cardiospasm.

Most patients with the short-esophagus type of esophageal hiatal hernia can be managed nonsurgically. They are usually placed on an ulcer regimen with the use of antacids and are instructed in ways to prevent regurgitation of acid gastric juice into the lower part of the esophagus. They are told to sleep with the head of the bed elevated at least 4 to 6 inches by blocks of wood placed under the legs of the head of the bed. Every attempt should be made to reduce intra-abdominal pressure, by weight reduction if they are obese, and by the avoidance of tight garments. If a stricture of the esophagus is present, it can be dilated by passing esophageal dilating sounds. Most patients get along so well on this program of treatment that nothing further is necessary.

If nonsurgical treatment is tried and is ineffective in controlling severe symptoms such as retrosternal pain or hemorrhage, it may be necessary to consider some form of surgical treatment. In the past, subtotal gastrectomy with removal of 75 to 80 per cent of the stomach has been fairly successful in controlling most of the symptoms in the majority of patients. One objection to this operation is that the ulcer and the stricture are left behind and there may be further danger of hemorrhage. There is also the continued necessity of dilating the esophagus. Esophagogastric resection has been done, but many patients have had

recurrence of esophageal ulcers because a sufficient portion of the acid-secreting part of the stomach was not removed. If this procedure is done, all the acid-secreting part of the stomach should be removed and the esophagus should be anastomosed with the gastric antrum. Recurrent esophagitis may also be minimized by doing, in addition to this, an extramucosal pyloromyotomy to facilitate drainage from the remaining portions of the esophagus and stomach.

Another surgical method of attacking this problem in patients who are having severe symptoms is that described by Allison, namely Roux Y esophagojejunostomy.

ABSTRACTS

Preliminary Studies with 2,6-Dimethoxyphenyl Penicillin in Children and Newborn Infants

—P. A. Day, W. Osborn, H. L. Weinberger, W. Mesibov, H. Robidou, and P. F. Wehrle

Amer J Dis Child—Vol. 102:785 (Dec.) 1961

2,6-Dimethoxyphenyl penicillin is rapidly absorbed and excreted following parenteral injection. Peak levels appeared in 30 minutes, and therapeutic levels persisted for 3 to 4 hours following 25 and 50 mg/kg. doses. Excretion of the drug was delayed in the newborn. Excellent therapeutic response was obtained in 13 clinical infections due to both penicillin G. sensitive and resistant organisms. Decreased staphylococcal colonization rates were observed in the nursery following injections of 250 mg. on the first and third day of life. No local or systemic evidence of toxicity was observed.

Adolescent Acne and Dietary Iodine—J. M. Hitch and B. G. Greenberg

Arch Derm—Vol. 84:898 (Dec.) 1961

Approximately 1,200 adolescents were examined for "seborrhea complex" and usual signs of acne. The findings were related to iodine intake in food, water, and salt. No correlation between high or low iodine intake and the incidence or severity of the disease was demonstrated by customary tabulations. The same material, subjected to analysis by multiple regression technique, showed that cysts and scars may be increased by high dietary iodine.

Incidence of Abnormal Electrocardiographic Findings in Office Patients Suffering from Anginal Syndrome—H. Roesler

Contrary to many electrocardiographic findings in patients with classical angina pectoris is high. A study of the records of 366 office patients revealed an incidence of 86.3% abnormal tracings. The findings in 81.4% were compatible with ischemic heart disease. Of these, 13.4% showed T-wave alterations, 19.2% the so-called ischemic pattern, 26% the so-called anoxia pattern, and 22.8% evidence of major infarctions in the past.

Dosage of Penicillin for Acute Gonorrhea of Males—L. D. Sabbath and J. J. Kivlahan

Amer J Med Sci—Vol. 242:663 (Dec.) 1961

Acute gonorrheal urethritis in 507 patients was treated with aqueous procaine penicillin (APP) (404 cases), or procaine penicillin in oil with 2% aluminum monostearate (PAM) (103 cases). Failure rates ranged from 40% (with PAM to 1% (APP, retreating initial failures). Dosage regimens expected to give highest blood levels got best results, and this was more important than duration of treatment, total dosage, or previous infection. The related roles of changing organism sensitivity, variability of drug blood levels, problems of agent identification and drug destruction were discussed. Penicillin alone, in adequate dosage, was felt to be excellent therapy, even for "resistant cases."

Zollinger-Ellison Syndrome—J. F. Potter and S. M. Sabesin

The syndrome of (1) intractable peptic ulceration, (2) marked gastric hypersecretion, (3) non-insulin producing islet cell tumors of the pancreas was observed in 2 patients. One patient also had acromegaly, giant gastric rugal hypertrophy, and hypoproteinemia. Histologically adenomas of the pituitary, parathyroid, adrenal, and thyroid were seen. The other patient, with a 21-year history of peptic ulcer disease, has enjoyed a complete remission since surgery in November 1959, at which time a 540 gm. tumor was excised. The pathogenesis of this disease, the aspects of surgical therapy, and the histological features of islet cell tumors are discussed.

MANAGEMENT OF MEDICAL COMPLICATIONS OF PREGNANCY

Stewart A. Fish, M.D., Dallas, Texas*

*Presented at the meeting
of the Arkansas Medical Society,
Little Rock, Arkansas, April 17-19, 1961*

PRACTICALLY ALL OF THE diseases known to medical science have been encountered during the course of pregnancy. There is no reason to expect this to be otherwise, since pregnancy does not produce an increased immunity to any disease or does it (except possibly in a few instances) predispose to the development of conditions unrelated to pregnancy.

There are a number of important medical complications of pregnancy which occur frequently enough so that all of us who do obstetrics should be familiar with their proper management even though we may divide the total responsibility of the patient with some other physician. I am going to limit my discussion to the principles of management of the most significant medical diseases which we encounter. I also want to share with you some recent advances in the management of these diseases and mention some errors which are commonly made and how they might best be avoided.

DIABETES AND PREGNANCY: In the last decade this subject has been discussed at practically every medical meeting and perhaps rightly so. Certainly pregnancy has a profound effect on the course of diabetes and vice versa. If you will recall, diabetics who become pregnant are subject to a number of special problems, the most important of

which is usually an increased difficulty in adequately controlling the sugar metabolism. There may be either a marked increase in insulin requirement or such a fluctuation in the daily insulin demand that there is an ever present chance the patient may develop acidosis or repeated insulin reactions. Vomiting, diarrhea and infection, all of which may develop in relation to pregnancy, further compound the difficulties in achieving optimum control of the diabetes.

We also know that the fetus is liable to significant dangers which are not as commonly seen in the non-diabetic. There is an increased incidence of toxemia of pregnancy and hydramnios. Fetal death may occur unexpectedly in utero without a clearly defined cause. Congenital malformations are more frequent and there are an increased number of spontaneous abortions and premature births. Excessively large babies are often seen and many of these infants have been lost due to ill advised attempts at vaginal delivery.

Certain principles of management of the pregnant diabetic have been proven effective and are widely accepted and I would like to summarize these for you:

1. The diabetic patient should be seen more frequently than usual during the course of her pregnancy. Ideally, this should be every week and certainly more often if indicated. This makes

*The Department of Obstetrics and Gynecology, The University of Texas Southwestern Medical School.

it possible to detect at a favorable time such complications as edema, hypertension, hydramnios, eye ground changes and significant fluctuations in the daily insulin requirement. Many obstetricians prefer to see these patients jointly with an Internist who has had experience with pregnant diabetics and is interested in helping with this special problem. Meticulous control of maternal diabetes is probably *the most important factor* which contributes to a successful outcome for both mother and infant.

2. Early hospitalization is definitely indicated if any complications develop and many recommend that patients should be routinely admitted to the hospital for observations and re-evaluation at approximately 30 weeks of pregnancy. This is particularly true if difficulty has been experienced in controlling the diabetes or if there have been episodes of acidosis.

3. The pregnancy should be terminated at approximately 36 weeks because the fetus may be jeopardized if toxemia or acidosis suddenly develops or if hydramnios is present. Unexplained intrauterine fetal death also occurs during the last several weeks which lends support to this opinion. Careful judgment must be exercised, however, and too early interruption of the pregnancy may increase the risk of prematurity and fetal death.

4. Delivery should be accomplished by a method which is least traumatic for the mother and baby. If the patient is not easily inducible or there is some obstetric complication which would make vaginal delivery hazardous under ordinary circumstances, then cesarean section should be performed.

5. *The baby must have special care.* Immediately after birth the infant's stomach should be aspirated and a clear airway established. Even if the birth weight of the child is considered normal it should be treated as a premature in every instance and should be kept in an incubator with adequately humidified air and all supportive measures freely used. Given¹ and others have pointed out that many of these infants may develop cardiac failure and digitalization may be indicated in a newborn that shows evidence of respiratory distress. Hypoglycemia may be a hazard to the newborn and a cord blood sugar performed three hours after delivery may be helpful. If the

value is less than the normal 30-40 mgm. per 100 cc. found in the newborn, glucose should be given.

These are the general principles of management of the pregnant diabetic. It must be re-emphasized that these individuals require considerably more than average attention if a successful outcome of the pregnancy is to be achieved and the patient and the doctor must both thoroughly understand this.

There are two special problems which I would like to mention at this time. First, in the past few years, the oral hypoglycemic agents have been used in the control of the pregnant diabetic. Since these chemicals can cross the placenta into the fetus there is theoretically a chance of producing significant hypoglycemia in the fetus which could result in abnormalities of growth and development. There is, however, no real evidence at the present time that any damage to the fetus has occurred when these drugs have been used and in my limited experience these agents have been safe and are occasionally useful adjuncts in controlling the blood sugar levels.

Secondly, Chlorothiazide is widely used in the treatment of pregnant patients with edema. When this agent is used in the pregnant diabetic the resulting increased excretion of sodium, potassium and chlorides may accelerate the development of ketoacidosis.² I believe this type of drug should be used very cautiously if at all in the pregnant diabetic until more is known about this special situation.

HEART DISEASE AND PREGNANCY: In recent years the number of pregnant women with severely damaged hearts has become significantly less. This is probably due to the fact that rheumatic fever is being treated more successfully in the young person and less residual heart damage results. Congenital malformations of the heart which can now be surgically corrected were in the past often fatal. We will be seeing more patients in the latter group in the coming years and it is important that we continue to understand the cardiovascular stresses which occur as a result of gestation and how to assist the patient with a compromised heart safely through the course of pregnancy.

There are two major stresses to which the heart is subjected during pregnancy. The first is an increase in blood volume of approximately 45 per

cent. This is said to reach a maximum at the 36th week and to decline rapidly after delivery. The second is an increase in cardiac output or work, which is greatest at approximately 28 weeks and supposedly declines somewhat prior to delivery.

When a patient with heart disease is first seen a complete evaluation of the functional capacity of the heart should be made. It is often advisable to share this responsibility with a physician who is skilled in cardiac disorders. In very few instances is the interruption of pregnancy indicated and this is usually limited to the Class IV cardiac who is in distress even at complete rest.

When the decision to allow the patient to continue with the pregnancy has been made the following general principles should guide the physician.^{3, 4}

1. The patient should have at least nine hours rest at night and one hour rest each afternoon along with a reduction in physical exercise such as climbing stairs.

2. Anemia must be corrected and a normal hemoglobin maintained.

3. Respiratory and urinary tract diseases which are so commonly seen during pregnancy must be treated early and aggressively.

4. The total weight gain must be limited to 15 pounds and any obesity corrected. A high vitamin intake is recommended.

5. Toxemia, even in the mildest degree, must be treated immediately.

6. A good emotional climate with a minimal amount of tension producing situations is most important.

7. Frequent office visits are indicated.

When the patient nears term it is advisable to hospitalize her and await the onset of labor. If this is impossible, bed rest at home is mandatory. Labor should be allowed to occur spontaneously and induction with oxytocics is contraindicated unless some obstetric reason is present. With the onset of labor the following obstetric rules should be observed:

1. Allow the patient to labor with the head of the bed well elevated and check vital signs frequently. The lung fields should be listened to repeatedly.

2. Use adequate, but not excessive, sedation. Drugs such as scopolamine, which might cause the

patient to become excessively restless should be omitted.

3. Atraumatic elimination of the second stage of labor is in order so that excessive expulsive efforts on the part of the patient may be avoided.

4. Local or regional anesthesia should be used if possible.

5. No oxytocics are given following delivery of the placenta unless there is dangerous bleeding.

6. The patient's legs should be elevated as short a time as possible.

7. At least several days postpartum bed rest is advised and hospitalization should be continued for at least one week.

8. Postpartum sterilization should not be considered for a minimum of eight weeks.

If the above general principles are followed the great majority of patients with cardiac disease will tolerate pregnancy without complications. Cesarean section should not be elected as a method of delivery except when there is a definite obstetric indication, since it is fully as much of a stress to the cardiac as normal labor.

The most common errors in the management of the pregnant cardiac have been summarized by Douglass.⁵ They are:

1. Failure to diagnose and properly evaluate the cardiac status.

2. Failure to impress the patient with the seriousness of the situation and obtain her full cooperation.

3. Failure to hospitalize the patient at the earliest sign of decompensation and to continue hospitalization until well after delivery.

4. Failure to admit all cardiacs to the hospital several weeks prior to delivery.

5. The use of inhalation anesthesia instead of regional or local.

6. Too early ambulation and too short hospitalization.

TUBERCULOSIS AND PREGNANCY: Because of persistent efforts at early case finding and with the recent improvements in therapy of tuberculosis, the physician is seeing fewer cases of far advanced disease and more patients with arrested or minimally active early lesions. There is also the newer problem of the management of pregnancy in patients under long term chemotherapy or in those who have had surgical therapy such as segmental pulmonary resection.

For some time it has been well accepted that there is no specific effect of tuberculosis on pregnancy. Only a few cases of infection of the fetus with the tubercle bacillus *in utero* have been documented. However, the risk of the mother with positive sputum infecting the newborn still exists if contact is freely allowed and the general rule of isolation of the infant from the mother after birth still holds true. Many investigators have also shown repeatedly that pregnancy has no effect on the course of pulmonary tuberculosis. As a result, it is apparent that any patient who has active disease and is pregnant should have the tuberculosis treated exactly as it would be normally and the pregnancy ignored as far as treatment goes. There is no evidence that interruption of pregnancy is ever indicated. Certainly pregnancy should not be undertaken knowingly if active disease is present but interruption of a pregnancy will not modify the course of tuberculosis as far as can be determined.

In patients who are under therapy with the various chemotherapeutic and antibiotic agents, there is no known ill effect on the fetus if the doses that are commonly recommended are used. Streptomycin in large doses should probably be avoided because of the theoretical possibility of damage to the fetal auditory apparatus. Those individuals who have had surgical procedures for pulmonary tuberculosis should be evaluated from the standpoint of pulmonary reserve and treated accordingly throughout the pregnancy.

The basic rules which should be observed in the conduct of delivery of a patient with tuberculosis are:

1. Analgesic agents used in labor should produce minimal depression of the cough reflex and respiration.
2. Regional or local anesthesia is employed and general anesthesia should not be used.
3. Prolonged labor should be avoided and the second stage eliminated as atraumatically as possible. Cesarean section is not indicated except for obstetric reasons or to avoid a long exhausting labor.

In the tubercular whose disease becomes arrested, an interval of from two to five years is usually recommended before pregnancy is undertaken, although Rosenbach and Gangemi⁶ have found no reason to discourage pregnancy in any of their patients with clinically and roentgeno-

graphically inactive disease. In this group, if additional children are desired, the pregnancies should be spaced properly so the mother will not become excessively burdened with the physical care of young children and approximately two to three years seems to be a reasonable interval.

THYROID DISEASE AND PREGNANCY: Most patients with severe or untreated hypothyroidism do not become pregnant. Because of this there are only three main thyroid problems commonly seen during pregnancy. They are the discovery of a solitary thyroid nodule, the development of thyrotoxicosis during pregnancy or the occurrence of pregnancy in a person who is under medical treatment for hyperthyroidism.

The first of these conditions, the solitary thyroid nodule, is managed much as it is in the non-pregnant state. Since there is a reasonable possibility of malignancy in these nodules, surgical removal is usually recommended.

Uncontrolled thyrotoxicosis is known to produce adverse maternal and fetal effects such as an increased incidence of toxemia and an increased fetal loss from abortion and prematurity. When the thyrotoxicosis is controlled, the risk to the mother and fetus is apparently no greater than in a normal pregnancy. There is general disagreement as to whether pregnancy exacerbates thyrotoxicosis and no definite evidence is available to settle this question. The physician may experience difficulty in diagnosing thyrotoxicosis during pregnancy because of the normal increase in the size of the gland and the fact that thyroid function tests change with pregnancy. The basal metabolic rate is known to be normal in the first half of pregnancy followed by a progressive elevation of 15-25 per cent at term. This is thought to be mostly due to the increased oxygen consumption of the uterus and its contents. The protein bound iodine is usually considered to be elevated from about six weeks of gestation to several days postpartum. The normal level of 4-8 mcgm. per cent rises to 6.2-11.2 mgm. per cent although values as high as 13-14 mcgm. per cent have been recorded. There are no published studies of I_{131} uptake during pregnancy since it is known that the fetal thyroid may concentrate this substance beginning at about the 13th week, and this could produce complete fetal thyroid ablation.

The therapy of thyrotoxicosis during pregnancy

may be both medical and surgical and the use of radioactive iodine is forbidden for the reasons just mentioned. Medical therapy is complicated by the fact that the thiourea derivatives usually used pass through the placenta and fetal goiter and cretinism may result. This is not always the case, particularly if it is not necessary to continue treatment throughout the entire pregnancy.

The surgical therapy of thyrotoxicosis is probably most advantageous because, if successful, it produces a prompt, complete, and usually permanent remission. Thyroidectomy may be performed at almost anytime during pregnancy but the middle trimester is thought to be the most propitious. It is most important to determine thyroid function by PBI or BMR soon after surgery and if there is any evidence of hypothyroidism, supplementary thyroid medication should be given. Failure to do this probably accounts for the abortions which occasionally follow thyroid surgery during pregnancy.

ACUTE INFECTIOUS DISEASES AND PREGNANCY:

I. *Rubella*. For some years, german measles has been known to produce abortion or fetal anomalies such as cataract, deafness and congenital heart disease when it occurs during the early part of pregnancy. Bell⁷ has recently collected data on the outcome of 712 pregnancies in women who had Rubella during the first 16 weeks. There were 421 defects noted, and some children had more than one defect. Cataract was noted in 69 per cent, deafness in 37 per cent, and congenital heart disease in 30 per cent. Many of these defects were not noted at birth but were discovered between the ages of two and six years. The highest incidence of malformations occurred when Rubella was contracted between the fifth and eighth week of pregnancy.

This is certainly a significant study and Bell recommends that abortion be performed in all cases of proven maternal Rubella occurring in the first twelve weeks of pregnancy. Rubella late in pregnancy apparently has no effect on the fetus. A recently published prospective study performed by Lock et al.⁸ confirms these findings and is in general agreement with the above recommendations.

II. *Infectious or Viral Hepatitis*. There has been a significant increase in the number of cases of proven viral hepatitis in the past several years.

Undoubtedly a number of "sub-clinical" or non-icteric cases have escaped our notice. Pregnant women who contract viral hepatitis may die just as anyone who suffers from this disease. There does not seem to be any predilection for the disease in pregnancy and if the state of nutrition of the patient is good at the onset of the disease, the chance of survival is excellent providing the usual methods of treatment are employed. Roth⁹ has pointed out that the virus responsible for hepatitis crosses the placenta. Although there is no evidence that fetal deformity has been produced, every child born of a mother suffering from hepatitis should be watched carefully for the disease for at least four to six months. Many suggest the newborn be given gamma globulin prophylactically.

During delivery, hemorrhage is the most outstanding danger since there may be a prothrombin deficiency or other blood clotting defect. Vitamin K oxide should be given and all drugs avoided which are metabolized in the liver or are hepatotoxic. Spinal anesthesia is contraindicated as it is in anyone with a lowered prothrombin activity. Whole blood transfusions should be given only if absolutely necessary in order to avoid the possibility of producing a superimposed infection with the virus which produces serum hepatitis.

With meticulous medical and obstetric care most all patients with hepatitis will survive pregnancy without difficulty and not suffer any permanent disability other than that usually seen in the non-pregnant person.

III. *Chickenpox and Pregnancy*. Varicella has traditionally been a relatively mild childhood disease in the experience of most physicians. When chickenpox occurs in the adult this is another matter. The lungs may be involved by a diffuse interstitial pneumonitis which is often fatal. Other organs such as the brain, liver, pleura, kidneys and gastrointestinal mucous membranes may be severely affected by the disease.

There does not appear to be any particular tendency to disseminated chickenpox during pregnancy. However, during the past several years four maternal deaths due to varicella have occurred in Texas and have come to my attention.¹⁰ Probably death could have been prevented in several instances if the potential seriousness of the condition had been realized. When any pregnant

woman develops varicella it is wise to follow the patient very closely and at the first sign of any pulmonary involvement the patient should be hospitalized immediately. Treatment should then be directed toward the maintenance of an adequate pulmonary exchange and no attempt made to interfere with the pregnancy. There is no specific drug therapy available which will cure varicella but with early hospitalization and intensive care the patient has a good chance of survival. In the four cases which I have mentioned the infants were lost. Occasionally an infant born of a mother with chickenpox will show evidence of the disease but none was found in our four.

REFERENCES

1. Given, W. P., Douglas, R. G. & Tolstoi, C. *Clinical Obstet. & Gynec.* 1:53, March, 1958.
2. Sugar, S. J. N. *J.A.M.A.* 175:164, Feb. 18, 1961.
3. Kaltreider, D. F. *West Va. Medical Monthly*, January, 1957.
4. Burwell, C. S. *J.A.M.A.* 166:153, Jan. 11, 1958.
5. Douglass, L. H., and Hoopes, L. L. *Am. J. Obstet. and Gynec.* 61:373, Feb., 1951.
6. Rosenbach, L. M., and Gangemi, C. R. *J.A.M.A.* 161:1035, July 14, 1956.
7. Bell, J. *Brit. Med. J.* 1:686, 1959.
8. Lock, F. R., Gatling, H. B., Mauzy, C. H., and Wells, H. B. *Am. J. Obstet. and Gynec.* 81:451, March, 1961.
9. Roth, L. G. *Clin. Obstet. and Gynec.* 1:87, March, 1958.
10. Fish, S. A. *J.A.M.A.* 173:76, July 2, 1960.

ABSTRACTS

Mallory-Weiss Syndrome—H. D. Zeifer

Ann Surg—Vol. 154:957 (Dec.) 1961

Persistent vomiting from any cause followed by gastrointestinal hemorrhage due to cardioesophageal lacerations comprise the Mallory-Weiss syndrome. The author reviewed 10 surgical cases and delineated 3 groups on the basis of the location of the ulcer: (1) distal esophagus, (2) proximal stomach, (3) cardioesophageal. Groups 1 and 2 were the most common surgical situations. Group 3 was the least common in this surgical series and resembled the classical Mallory-Weiss ulcer as seen in the autopsied cases. It is believed that the debilitated chronically ill patient vomits weakly and produces a cardioesophageal ulcer while the more vigorous patient lacerates either his esophagus or proximal stomach.

Rectosigmoidal Rupture Caused by Effort—T. Minkari and C. Turan

Ann Surg—Vol. 154:967 (Dec.) 1961

This case of rupture of the rectum, brought about by violent effort with extravasation of approximately 2 meters of terminal ileum through the rectum, is being reported because of a rarity of the situation as reported in the domestic and world literature. At laparotomy, the afferent and efferent limbs of the small intestine were transected by the intraperitoneal route. The rent in the mesentery was closed, and the gangrenous in-

volvéd bowel was withdrawn by the perineal route. The patient made a complete recovery. Thirty-two cases of rectal rupture have been reported incidental to effort. In 8 of these cases, reposition was attempted. Four of them were accomplished successfully, but only one survived. In 22 cases a laparotomy was performed, and only 4 of these survived. In the case reported, 3 meters and 25 centimeters of small intestine was resected anteriorly. Continuity of the bowel was achieved by an ileotransversostomy. The rent in the rectal wall was closed transabdominally. Only 5 to 32 cases reported have survived.

Hypoventilation and Heart Disease—P. M. S. Gil- lam and D. Mymin

Lancet—Vol. 2:853 (Oct. 14) 1961

A case of heart disease in an obese man is described. The patient presented with a large heart and clinical tricuspid incompetence. Cardiac catheter abnormalities were pulmonary artery hypertension and systemic arterial desaturation at rest. The administration of 100% oxygen restored both to normal. Lung function tests showed hypoventilation (raised $p\text{CO}_2$) but no parenchymal disease (normal spirometry, diffusing capacity). The case demonstrates a link between hypoventilation and heart disease through hypoxic pulmonary hypertension, before organic pulmonary vascular disease has developed.

RENAL HYPERTENSION

Ralph A. Downs, M.D., Fort Smith, Arkansas

IN GENERAL THERE ARE three types of renal lesions, which are capable of producing renal hypertension:

1. Parenchymal diseases such as glomerulonephritis and bilateral chronic pyelonephritis;
2. Perirenal hematomas (Page kidney);¹
3. Occlusive renal artery disease.

This paper will confine its discussion to the latter.

The association of hypertension with renal disease was first suggested by Bright in 1827. Goldblatt's clinical experiment in 1934,² in which hypertension was produced in animals by the partial compression of the main renal artery, stimulated considerable clinical interest in "unilateral renal disease" as a source of hypertension. Overall, in the past the removal of the unilateral atrophied kidney in an attempt to relieve hypertension has not been encouraging. A study by Smith³ of 575 such hypertensive patients who had been nephrectomized revealed that only 26% remained normotensive for one year. It was thought by Smith³ that approximately 2% of all hypertensive patients could expect relief by surgical removal of the diseased kidney.

In the past decade significant advances have been made in this field primarily due to the knowledge that has been obtained from the use of aortography. This test has made it possible to determine: 1) the presence or absence of renal vascular lesions, 2) the type of renal vascular lesions, and 3) the locations of such lesions. With this information it is possible to apply the proper surgical treatment, and consequently the percentage of patients benefited by surgery will be vastly increased.

Since the development of aortography, it has been suggested by Poutasse⁴ that the term "unilateral renal disease," which is used in conjunc-

tion with hypertension, should be abandoned; and in its place the term "occlusive disease of the renal artery or its major branches" should be used. It has been pointed out by Poutasse⁴ that one out of four cases of occlusive renal artery disease is bilateral. It is well established now that kidneys that appear perfectly normal on intravenous or retrograde pyelography may have definite arterial diseases, capable of producing hypertension. In such cases a definite diagnosis cannot be made without the help of aortography. By the same token, in some cases where there is a small, atrophied kidney on one side and a normal-appearing kidney on the other side, the latter may contain obstructive renal artery disease that might be producing the hypertension. In such cases, the removal of the atrophied kidney would not change the course of the patient's hypertension.

Aortography is a relatively safe procedure. Reports of serious complications in the past have discouraged many physicians from using this procedure when it was definitely indicated. The complications that have been reported in the past are thought to be due to one or a combination of the following factors:

- 1) Insertion of the needle too high above the renal arteries, so that the dye is injected directly into the celiac axis or the superior mesenteric artery;
- 2) The use of toxic dye;
- 3) The use of excessive volume of dye;
- 4) The use of general anesthesia in an inappropriate surrounding, such as the x-ray department, where proper resuscitatory equipment is not at hand.

The technique, which has been used at the Cleveland Clinic in over 600 cases without com-

plication⁵ and by the author with good results, is as follows:

- 1) Local anesthesia is used. The skin and musculature of the back in an area at the tip of the twelfth rib is anesthetized. A 6 inch, 18 gauge spinal needle is introduced at this point and directed toward the vertebral body of the first lumbar vertebra. At this level the aorta is punctured. An attempt is made to introduce the needle into the aorta at the level of the renal arteries or just below (fig. 1).



Figure 1

- 2) After the needle is inserted, 10 cc. of 1% Procaine is introduced into the aorta to relieve vasospasm.
- 3) 10 cc. of the dilute Hypaque solutoin (25%) is introduced, and a preliminary x-ray is taken to determine if the needle is in the proper location and if both renal arteries are filled with dye. The needle is left in place while this x-ray is developed. If all is well, then 10 cc. of 50% Hypaque is injected, and the last x-ray is taken.

- 4) Hypotensive medication may be administered by the anesthesiologist just before the aortogram is done if the hypertension is excessive. The indications for aortography are as follows:

- 1) Difference in the size of the kidney shadows as revealed by intravenous urography;
- 2) The evidence of relative dimension of function in one kidney, as may be revealed by intravenous pyelography or by a split function test;
- 3) Hypertension in patients less than thirty-five years of age;
- 4) Abrupt development of hypertension in any age group;
- 5) Hypertension that follows an episode of flank pain, suggesting a renal vascular accident.

In conjunction with aortography, split function renal tests with bilateral ureteral catheterization are helpful in confirming the diagnosis of renal hypertension. Kidneys that have restricted arteries show impairment of renal function, reduction of the volume of urinary output, and low electrolytic content. The Howard test is widely used to demonstrate this. Similar tests with the use of PSP or indigo carmine are also useful.

The pathology of the obstructive lesions found in renal arteries has been reported as follows: 1) atherosclerosis, 2) thrombosis, 3) muscular hyperplasia, 4) stenosis with scarring, 5) idiopathic stenosis, 6) dissecting aneurysms. Atherosclerotic plaques are the most common causes of obstruction in the renal artery. Vascular hyperplasia and idiopathic stenosis are usually found in young individuals. These lesions are found either in the main renal artery or its branches.

Figure 2 reveals an aortogram of the right kidney, which demonstrates a normal renal artery and its branches. Usually the renal artery has five major branches, which fan out to supply the renal parenchyma. Obstructive lesions can be demonstrated either in the main renal artery or its branches. If the branches are obstructed, often an avascular or atrophied area of renal parenchyma can be seen on the aortogram.

The surgical procedures that have been used for the treatment of obstructive renal artery disease are as follows: 1) excision of the obstructive lesion and end-to-end anastomosis of the renal artery, 2) excision of the renal artery from the aorta and re-anastomosis of the renal artery to the aorta, 3) the use of the splenic artery to shunt the obstructive lesion when the lesion is on



Figure 2

the left side (splenorenal arterial anastomosis), 4) endarterectomies (the removal of atherosclerotic plaques in the artery or its branches), 5) plastic arterial grafts are used to replace the diseased segment of renal artery; when the lesion is bilateral, molds of the aorta and its renal branches are implanted into the aorta after the diseased portion of the aorta and renal arteries have been excised, 6) in the event of branch lesions usually the avascular portion of the kidney is excised by heminephrectomy, 7) when the kidney is not salvageable, of course, a nephrectomy is the only procedure of choice.

The results of surgical treatment in renal artery disease have been encouraging. In a recent

article by Poutasse¹ approximately 80% of selected patients operated on at the Cleveland Clinic from 1955 to 1959 were reported as having good results and having normal blood pressure postoperatively.

CONCLUSION

1. Accurate diagnosis of renal hypertension has been made possible by the use of aortography. Many cases thought to be essential hypertension in the past will be proven to have occlusive renal artery disease. Since the aortogram pinpoints the lesion as to type and location, proper surgical procedures can be applied; consequently, the over-all surgical results will be vastly improved in the future.
2. The technique of aortography has been worked out so that it is a relatively safe procedure and should be done when indicated.
3. Kidneys that look perfectly normal on intravenous or retrograde pyelography may contain definite obstructive arterial disease that can be demonstrated only by the aortogram.
4. Small unilateral atrophied kidneys may not be the offender in renal hypertension, since the normal-appearing mate on the opposite side may contain obstructive arterial disease producing the hypertension.
5. Renal artery surgery is highly technical and done mostly in the large medical centers, however, it is extremely important for all who treat hypertension to be cognizant of the possibilities of renal hypertension and to have no hesitancy in recommending adequate evaluation.

BIBLIOGRAPHY

1. Page, I. H., and Corcoran, A. C.: *Experimental Renal Hypertension*. Springfield, Illinois: Charles C Thomas, 1948.
2. Goldblatt, Harry: *The Renal Origin of Hypertension*. Springfield, Illinois: Charles C Thomas, 1948.
3. Smith, H. C.: *Journal of Urology*, 76:875-701, 1956.
4. Poutasse, E. F.: *Surgical Treatment of Renal Hypertension: results in patients with occlusive lesions of renal arteries*. *Journal of Urology*, 82:403-412, 1959.
5. Poutasse, E. F.: personal communication.



WHAT'S NEW?

MECHANICAL TREATMENT OF HEART BLOCK

Frederick B. Berry, M.D.

HEART BLOCK, OR ATRIAL-VENTRICULAR dissociation, is seen somewhat more frequently both because of its appearance as a sequel to the repair of ventricular septal defects which are now being repaired in large numbers and because of its appearance as a complication of coronary heart disease, which is also on the increase because of the larger population and the higher average age of the population. In about $\frac{3}{4}$ of the patients with heart-block coronary heart disease is the etiological factor. This may be associated with actual past or fresh infarction or with hypertension. Congenital heart-block accounts for but a very small percentage of the patients and surgical heart-block is the kind most commonly seen on surgical services. The average survival time of patients with coronary heart disease complicated by heart-block is about thirty months (1).

The symptoms of heart block vary widely from the experience of many patients with congenital heart-block who have no interference in their lives whatsoever to patients who are absolutely bed-ridden because of frequent syncopal attacks when they attempt to do so much as sit up. Syncopal attacks have long been recognized as the classic manifestation of heart-block. The syn-

copal attacks often are infrequent but in some people they can be so numerous as to be totally disabling. These attacks are related to periods of cerebral ischemia brought on by asystole of brief duration. In the erect position a brief asystole results in the head being virtually emptied of blood. An attack may terminate in sudden death. Congestive failure is related to the slow ventricular rate, which despite an increased stroke volume, often results in greatly reduced total cardiac output. This may be greatly aggravated by valvular lesions (2). In these patients the usual cardiac reagents are often of little or of limited effectiveness.

Both the steroids and isoproterenol have been successfully used, but despite these two, the medical treatment of severe grades of heart-block is unsatisfactory. Therefore, a great deal of interest has been focused upon the development of artificial pacemakers to be used for a relatively long period of time. Although external electrodes can be planted on each side of the chest, a current passed between them, and the heartbeat very satisfactorily regulated thereby, this method is much too unpleasant and clumsy for prolonged use. Lillebei (3) reported the use of a Teflon

coated wire buried directly into the cardiac muscle and brought out through the skin with a second indifferent electrode planted subcutaneously, the two wires then being connected to a transistorized pacemaker. It was soon found that monofilament wire quickly broke due to the constant beating of the heart but with the use of braided wire the electrode could be made to last much longer, actually for a period of several months. However, eventually the wire breaks or infection brought in through the wire to its point of implantation destroys the pacemaking activity of the mechanical unit. Glenn and Abrams^{4, 5} have devised totally internal units in which the myocardial and the indifferent electrode are passed to an induction coil or a tuned circuit which is buried beneath the skin and the pacemaker is led to a second induction coil lying just over the internal one. In this fashion the percutaneous route for infection is closed. However, no long term followup was reported on their patients and whether the method as presently carried out is suitable for long term usage is as yet undetermined. Medtronic, Inc. lists in its catalog a small transistorized pacemaker covered with Teflon which is designed to be buried subcutaneously. It runs on long-life batteries which need be changed but once or twice a year. With all of the long term units, however, wire breakage from fatigue continues to be a major problem after the unit has been in operation for some months.

Furman⁶ has reported an intracavitary electrode consisting of a wire imbedded in a non-conducting plastic with an electrode tip. This wire is about the length and size of a small cardiac catheter and is passed through a peripheral vein into the right ventricle in much the same fashion

as a catheter is passed in cardiac catheterization. This unit has been rather successful for use in periods from 6 months to a year, is very easy to carry out in very sick and debilitated people as only a small skin incision is needed, the catheter being passed under fluoroscopic control. It, however, requires some degree of supervision in that the patients are kept on long term anticoagulants.

Despite the limitations of the various units now available, the mechanical pacemakers are an enormous benefit to patients crippled by heart-block. In some patients only intermittent artificial pacemaking is necessary. Others need the pacemaker continuously. Whatever the defects of the system, even the artificial pacemakers available today, afford the patients the only real help that is available to them. In some patients truly long term control of cardiac rate ranging for periods of over a year, will be achieved.

REFERENCES

1. Long Term Follow Up of Heart Block. *Ann. Int. Med.* 49:260, '58.
2. Muller, O. F., and Bellet, S. Treatment of Intractable Heart Failure in the Presence of Complete Atrioventricular Heart Block by the Use of the Internal Cardiac Pacemaker. *N. Eng. Journ. Med.* 265:768, 1961.
3. Lillehei, et al. Use of the Internal Pacemaker. *Journ. Am. M. A.* 172:2006, 30/4/60.
4. Glenn, W. L., Mauro, A., Longo, E., Laviets, P. A., Mackay, F. J. Remote Stimulation of the Heart by Radio frequency Transmission. *N. Eng. Jour. Med.* 261:948, '59.
5. Abrams, L. D., Hudson, W. A., and Lightwood, R. A Surgical Approach to the Management of Heart Block Using an Inductive Coupled Artificial Cardiac Pacemaker. *Lancet* 1:1372; 6/25/60.
6. Furman, S., Schwedel, J. B. An Intra Cardiac Pacemaker for Stokes-Adams Seizures. *N. Eng. Journ. Med.* 261:943, '59.

TEACHING SEMINAR

Department of Medicine
University of Arkansas Medical Center
Little Rock, Arkansas



DIGITALIS TOXICITY

Robert T. Bulloch, M.D., Instructor in Medicine

THE RECOGNITION, PREVENTION and treatment of toxicity due to the various digitalis preparations constitute some of the major clinical problems of the present time. Severe toxicity is stated to be more common than in the past with more patients receiving the drug in larger doses that are more rapidly administered. Unusual individual variations in tolerance to digitalis account for a small but important per cent of the total. It is the purpose of this report to review recent publications on this subject and to focus attention on cardiac arrhythmias seen in patients with digitalis toxicity in the absence of extracardiac symptoms. The relationship of this problem to the use of oral diuretics over long periods of time will be discussed. It has been suggested that differences do exist between toxic potentialities of different digitalis preparations but thus far this remains controversial.

Predisposing Conditions

DIURETICS

It has long been known that digitalis toxicity may develop when hypokalemia follows mercurial diuresis.² The untoward effects of chlorothiazide and its analogues are less well known. Chlorothia-

zide is a potent, orally effective, nonmercurial diuretic agent. It is a substituted benzothiadiazine compound with a free sulfonamide group which was synthesized in 1957 by Novello and Sprague. One important effect is increased excretion of potassium with hypokalemia. This may occur in the absence of marked diuresis or excessive dosages of the drug. Hypokalemia in turn may potentiate the toxic effects of digitalis on the heart. In advanced states of disease with impaired glomerular filtration and decreased sodium load to the renal tubules, despite maximal tubular interference by a potent drug, almost all of the sodium presented may be reabsorbed and significant diuresis not occur. Some patients are more responsive to the kaliuretic effect of chlorothiazide than are others. If sodium is retained, as noted above, or not readily available for excretion, as in rigid dietary restriction, potassium or other cations may be depleted. Low potassium levels may appear unexpectedly in some individuals even in the absence of a marked diuresis or large doses of the diuretic, suggesting a selective increase in excretion.

Those patients receiving digitalis and who require dosages of chlorothiazide greater than one gram daily, should be carefully followed for evi-

dence of digitalis toxicity. Therapeutic dosages of chlorothiazide not accompanied by an effective response should not be maintained because of continued electrolyte excretion. Dosages over two grams daily usually have no greater diuretic effect. Paracentesis, nasogastric suction and complications of vomiting and diarrhea, should be taken into account if diuretics must be given.³

Advanced Age and Cardiac Disease

These conditions are reported to increase susceptibility to digitalis. In the presence of severe myocardial involvement the therapeutic/toxic ratio of the drug may diminish to the point that digitalis can no longer be used effectively. The irritable myocardium has an increased susceptibility to the toxic effects of digitalis as seen in rheumatic as well as other forms of myocarditis. Good therapeutic results can be obtained, however, with cautious use of the drug. Frequent electrocardiograms are necessary since, especially in the aged, cardiac arrhythmias may be the only manifestation of toxicity.

Errors of Administration

Single dose digitalization and the use of increasing dosage rates, rather than giving the largest dose first and then decreasing, may cause digitalis toxicity. Placing on "maintenance dosage" without adequate follow up is a frequent cause of difficulty. Digitalis requirements of individuals vary and those patients placed on a fixed daily dose may slowly become toxic or, if the dosage is inadequate, slowly escape from an effectively digitalized state. Careful evaluation is usually necessary to determine which of these two states exist.

Myocardial Infarction

After experimental coronary artery ligation in dogs, Bellet and Associates found 23% less digitalis was required to produce death.⁴ The applicability of this data to humans has been questioned by Boyer, who administered digitalis to 50 consecutive patients with acute myocardial infarction and concluded that fear of using digitalis in acute infarction is not justified.⁵ Others report increased sensitivity to the drug and Friedberg⁶ is of the opinion that digitalis should not be given in acute myocardial infarction unless gross cardiac failure necessitates its use. In these circumstances digitalization should be slow and

cautious, avoiding the use of parenteral preparations if possible.

Cor Pulmonale

Baum reported a high incidence of digitalis toxicity in cor pulmonale.⁷ It has been noted that attempts to slow sinus tachycardia secondary to the pulmonary disease may result in use of excessive dosage. This is probably similar to the triad of tachycardia, digitalis toxicity and mercurial-fast edema seen in patients with multiple pulmonary emboli.

Renal and Thyroid Disease

No increase in toxicity is noted except in renal shutdown, or as the result of renal potassium wasting. Hypothyroidism and liver disease have been associated with increased sensitivity but evidence for this is meager.

Wolff-Parkinson-White Syndrome

This condition may also predispose to digitalis toxicity. In patients with atrial fibrillation accompanied by anomalous excitation, the ventricular rate can not be controlled with digitalis, and the tendency is to give increasing amounts of digitalis. This condition should be kept in mind in patients with atrial fibrillation with abnormally prolonged QRS complexes.^{8, 9}

Extracardiac Manifestations of Toxicity

1. Gastro-intestinal symptoms are most frequent; these include anorexia, nausea, vomiting or, occasionally, diarrhea. Symptoms appearing within one or two hours after an oral dose are usually due to local gastro-intestinal irritation and need not be confused with true toxicity.

2. Visual disturbances, such as "snow" or yellow vision, are not often primary symptoms, but their presence may be elicited on questioning.

3. Neurologic symptoms are occasionally observed, especially headache or neuralgias of the face and upper extremities.

4. A variety of vague symptoms may be manifest, especially in the aged or debilitated. These include general weakness, lassitude, insomnia, and irritability.

5. True idiosyncrasy to the drug is very rare; thrombocytopenic purpura has been described.¹⁰

Premature Beats

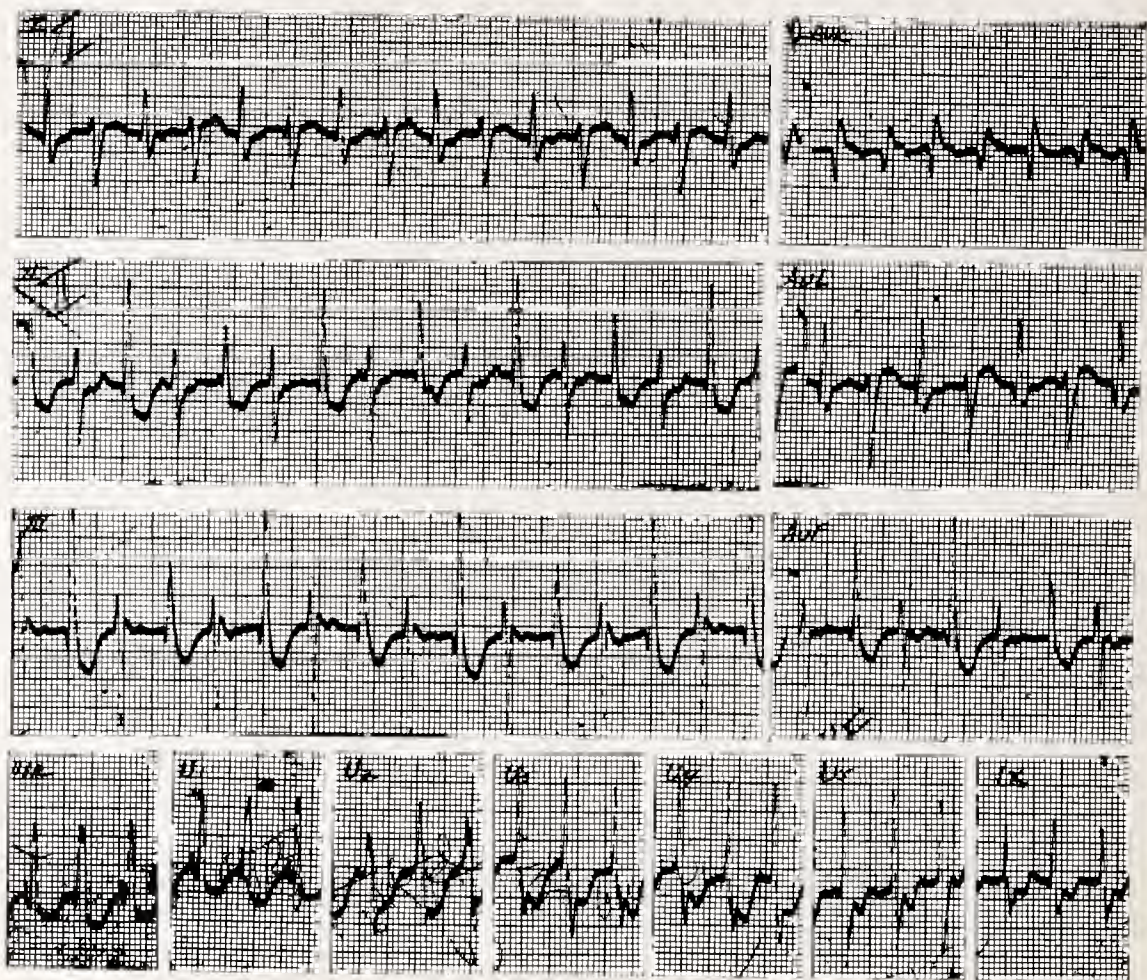
Premature beats represent the commonest digitalis-induced cardiac disturbance.¹¹ These are characteristically ventricular in form and much less frequently atrial or nodal. Premature ven-

tricular contractions may be of constant or variable configuration; the latter are due usually to diffuse ectopic foci. Bigeminal rhythm, or occasionally trigeminal, is a characteristic of premature ventricular contractions caused by digitalis. They may be a warning of imminent ventricular tachycardia and possibly of ventricular fibrillation. It is important to remember that premature beats may occur in congestive failure without digitalis and disappear upon administration of the drug. Usually it can be established whether they are due to digitalis by careful determination of the dose received and other evidence of toxicity. If uncertain, there is usually minimal risk in discontinuing the drug long enough to determine the causative factor.

is responsible for a relatively small percentage of ventricular tachycardia associated with acute or old infarction. Cases of bidirectional, alternating ventricular tachycardia are almost always caused by digitalis toxicity. Underlying myocardial damage may be an important predisposing factor. In ventricular tachycardia, if digitalis has been administered, it should be immediately discontinued because of the danger of ventricular fibrillation. In prolonged ventricular tachycardia in which other measures have failed, it may be necessary to resort to the use of digitalis. Such instances are very rare.

Atrioventricular Block

With severe overdigitalization complete heart block may occur as indicated by a slow, regular



Rate: Atrial—43/min., ventricular—approx. 180/min. QRS—prolonged—varies.
Interpretation: Abnormal. Bidirectional ventricular tachycardia. This represents definite evidence of digitalis toxicity.

Ventricular Tachycardia

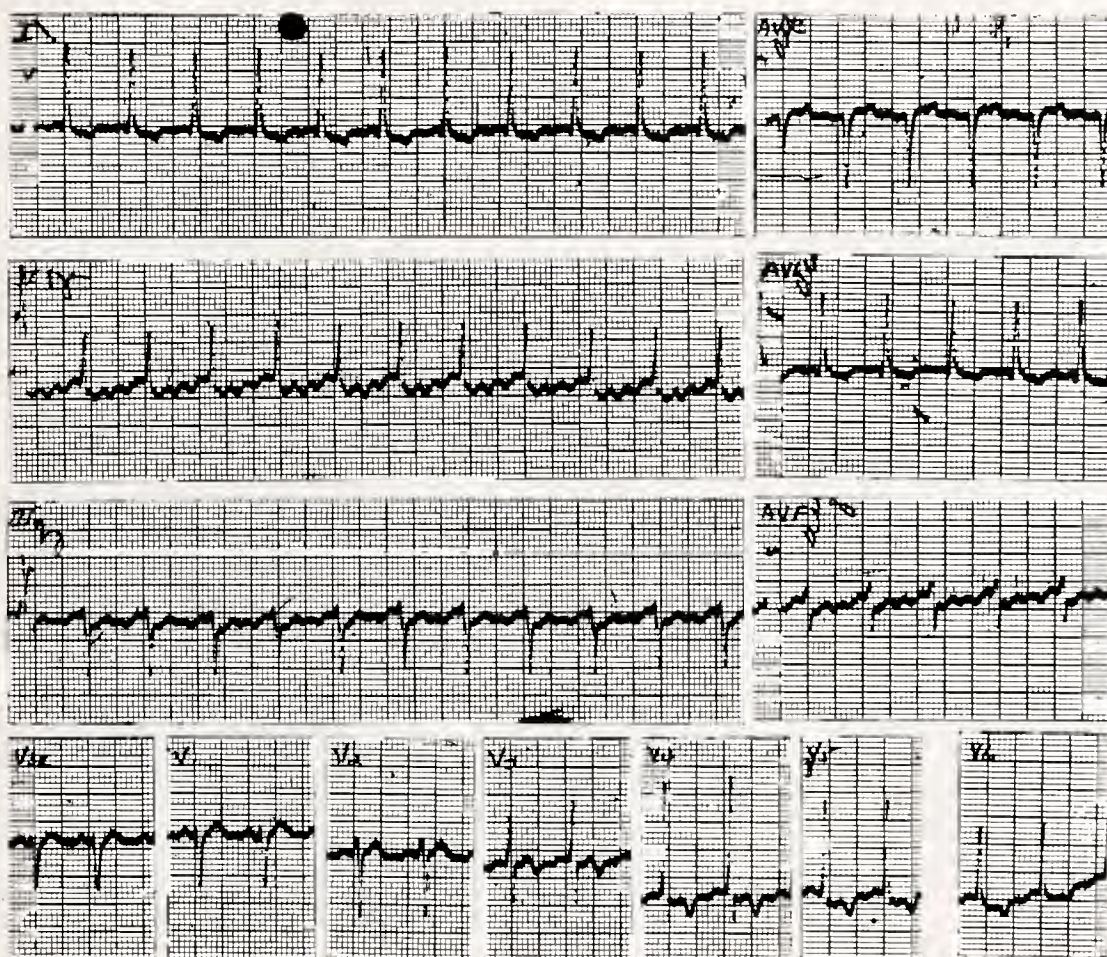
Ventricular tachycardia is not uncommonly induced by digitalis intoxication and is considered to be an extension of the mechanism responsible for premature ventricular contractions. Digitalis

rhythm. First degree av block is the most common form of heart block noted. In first degree block not due to digitalis there is apparently no contraindication if the drug is required for congestive failure. These patients should be watched

closely for development of complete heart block. In patients with complete heart block and slow ventricular rate it is unlikely that digitalis will help.

Atrioventricular dissociation is an occasional manifestation of digitalis toxicity. This arrhythmia has been defined as one in which the ventricles respond to one pacemaker and the atria to a different pacemaker. It is preferable to re-

rate being 160 to 200 per minute. Usually there is a two to one or variable ventricular response as in atrial flutter. However, the atrial rate is usually faster in flutter (over 200) and the p wave is usually inverted in leads II and III. Potassium will usually abolish the arrhythmia if due to digitalis but will not affect atrial flutter. This is an important arrhythmia because it indicates serious digitalis intoxication and is often mistaken



Rate: Atrial — 260; ventricular — 130; rhythm — Atrial tachycardia with 2:1 block.
 Interpretation: Abnormal. P waves abnormal in direction, P-P interval .23, R-R interval 46. Non-specific RS-T, T changes. Paroxysmal atrial tachycardia with 2:1 block.
 Comment: Commonly interpreted as atrial flutter or supraventricular arrhythmia requiring more digitalis when the tracing actually represents severe digitalis toxicity.

strict the term atrioventricular dissociation to cases in which the av node controls ventricular contractions at a rate which is slightly more rapid than that of the sinus pacemaker controlling the atria.

Paroxysmal Tachycardia With Block

The frequency of this arrhythmia is difficult to estimate because different reports have not entirely agreed on the incidence. It is characterized by ectopic atrial tachycardia with the usual atrial

for atrial arrhythmias which require more digitalis. Continued administration or increase in the dosage of the drug could cause death.

Effects of Digitalis in Atrial Fibrillation

In therapeutic doses digitalis slows ventricular rate to the normal range but with toxic dosage slowing may become marked as a result of high degree of atrioventricular block. Increased ventricular rate in atrial fibrillation may be noted following administration of a mercurial diuretic,

suggesting that potassium depletion precipitated the disturbance. The rate may rise to 160 to 200 per minute and digitalis is likely to be increased when it should be stopped. Atrial fibrillation *per se* is an uncommon manifestation of digitalis toxicity in patients with previous sinus rhythm and atrial flutter is even more uncommon.

Bundle Branch Block

Bundle branch block and intraventricular conduction disturbances are reported to be rarely if ever due to digitalis.¹²

Digitalis and Electrolytes

POTASSIUM

Administration of potassium has been noted to protect the heart against digitalis induced arrhythmias. This effect of potassium apparently does not interfere with the therapeutic action of digitalis. Investigators studying the isolated perfused heart reported that while potassium prevents toxic effects, it will not block the increase in contractility resulting from the addition of ouabain.¹³ It is important to know whether or not potassium alters both the lethal and the toxic thresholds to digitalis. If this was not true, the use of potassium would merely abolish the warning signs of an impending lethal overdose of digitalis. Experiments in dogs indicate that 40% more digitalis is required for lethal action in animals receiving potassium than in those not receiving potassium.¹⁴ Ventricular ectopic beats, regardless of the cause, can frequently be eliminated by the administration of potassium. Studies of the action of digitalis in the presence of potassium deficit suggest a physiologic as well as pharmacologic relation.

Depletion of body potassium stores will sensitize the myocardium to the toxic action of digitalis. It seems apparent that the post-diuretic syndrome of digitalis toxicity represents a state of increased myocardial sensitivity to the toxic properties of digitalis due to potassium loss. This is verified by the observation that toxic symptoms occur only when significant losses of potassium accompany the diuresis and do not occur when potassium losses are replaced. The tendency to potassium loss is also enhanced by prolonged and rigid restriction of salt intake. When sodium is in short supply the renal tubular cells secrete potassium and hydrogen ions in exchange for sodium ions in the tubular urine.

After long continued diuretic therapy such loss of potassium may lead to hypochloremic and hypokalemic alkalosis. Potassium losses are further enhanced by the administration of ammonium chloride given to potentiate mercurial diuretics. In the majority of patients the loss of potassium is from the great mass of intracellular potassium and cannot be detected by determining the serum level, which is often normal or elevated despite bodily depletion. Toxic doses of digitalis interfere with the disposition of potassium within the body.

Administration of potassium to patients with advanced heart failure exhibiting digitalis intoxication may cause serious hyperkalemia. The explanation of this has been said to be due to release of potassium by the liver¹⁵ and interference with its uptake by skeletal muscle when under the influence of digitalis. Thus treatment with potassium while essential may carry special hazards in this group.

CALCIUM

Calcium and digitalis have been found to have similar actions regarding both the contractility and excitability of heart muscle. It has been concluded, however, that in the intact animal a calcium-digitalis synergism on cardiac excitability cannot be demonstrated. Also unanswered is the question of whether or not calcium-digitalis synergism exists in the presence of heart failure. In recent experiments with dogs it was found that sustained reduction of serum calcium with a chelating agent doubled the dose of acetyl strophanthidin required to produce ventricular arrhythmias.¹⁶ Another effect of rapidly lowering serum calcium is hypotension with reduction of the cardiac output which if uncorrected will produce shock followed by death.

MAGNESIUM

Magnesium exerts an anti-arrhythmic effect on the myocardium and can abolish transiently digitalis induced arrhythmias. When the body is chronically depleted of magnesium by dietary deficiency of this ion, the heart becomes sensitized to the toxic action of digitalis.¹⁷

Treatment

DISCONTINUING ADMINISTRATION OF DIGITALIS

It will usually be necessary to immediately stop giving the drug once digitalis toxicity has

been diagnosed. In one series reported, toxic symptoms due to digitoxin disappeared at an average time of 9 days after the drug was discontinued.¹⁸ The average time for disappearance of symptoms in patients receiving digitoxin was two or three days. Both groups of patients received oral potassium therapy. Symptoms of toxicity with digitoxin may persist up to seven days but if noted after this, cause other than digitalis toxicity should be looked for.

POTASSIUM

If no evidence of hyperkalemia is present potassium can be given orally as chloride or citrate with an acceptable dosage schedule being 4 grams initially, followed by 2 grams hourly for two hours (total of 8 grams). This medication can also be given intravenously; the standard preparation contains KCl, 3 grams (13MEQ. per gm.) in 20 cc. of water. This solution can be diluted to 500 cc. with 5% glucose/water and be administered at a maximum rate of 5 cc. per minute (Approx. 25 MEQ./hour) until a total of 6.0 grams have been given. These dosages should not be exceeded in the first six hours unless severe potassium depletion is known to be present.¹⁹

A dangerous aspect of potassium therapy is undue reliance on the safety of its oral route of administration. Impaired urinary excretion of a single oral loading dose of KCl in patients with congestive heart failure has been reported.²⁰ Oral administration of KCl has been followed by fatal potassium intoxication. Some patients with measured daily urinary output exceeding 1,300 cc. developed severe electrocardiographic manifestations of potassium toxicity with markedly elevated serum potassium levels after four to five days of potassium therapy.²¹ Intravenously administered potassium when given should, in the opinion of many, be administered under continuous electrocardiographic control.

PROCAINE AMIDE AND QUINIDINE

The use of these drugs in the treatment of cardiac arrhythmias due to digitalis is discussed in standard textbooks and in an excellent review by Cohen. Since his review more information regarding the mode of action of the drugs has been obtained. Both have been found to influence potassium flux across the myocardial cell membrane resulting in a net increase in myocardial potassium content.

Potassium, procaine amide, and quinidine are myocardial depressants, and all may produce serious and long lasting toxic effects. If severe hyperkalemia, procaine amide or quinidine poisoning develops during the treatment of digitalis toxicity the use of intravenous molar sodium lactate has been reported to be of value in counteracting myocardial depression.²²

CHELATING AGENTS

A chelate can be defined as a chemical compound formed between a metallic ion and a molecule having two neighboring groups capable of simultaneously combining with a metal to form a ring structure. Some of these compounds such as trisodium ethylenediamine tetraacetate (Na_3EDTA) have a preferential affinity in the binding of calcium. Since it is known that calcium plays a prominent role in perpetuating cardiac arrhythmias and mimics digitalis in many ways, it was thought that if ionized calcium could be decreased, digitalis effect might also be diminished. In one series reported Na_3EDTA was effective in treating arrhythmias in most digitalis intoxicated patients, but was unreliable in the treatment of arrhythmias due to other causes. Complications have included tetany in one patient, who died of irreversible ventricular fibrillation when intravenous calcium was given.²³

BIBLIOGRAPHY

1. Kay, Calvin F. The clinical use of digitalis preparations. *Circulation*, 10:291, Aug. 1955.
2. Miller, G. H. and Smith, F. M. The presence of digitalis in edema fluid and its possible clinical significance. *J. Clin. Invest.*, 10:666, 1931.
3. Dinon, Louis R., Yung Sup Kim, and Vander Veer, Joseph B. Clinical experience with chlorothiazide (diuril) with particular emphasis on untoward responses, a report of 121 cases studied over a 15 month period. *Am. J. of the Medical Sciences*, 236:533, 1958.
4. Bellet, S., Johnston, C. G. and Schechter, A. Effect of Cardiac Infarction on the Tolerance of Dogs to Digitalis: an experimental study. *Arch. Int. Med.*, 54:509, 1934.
5. Boyer, N. H. Digitalis in Acute Myocardial Infarction. *New England J. Med.*, 252:536, 1955.
6. Friedberg, C. K. *Diseases of the Heart*, 2nd Ed. Philadelphia, 1956. W. B. Saunders Co.
7. Baum, G. L., Dick, M. M., Blum, A., Kaupe, A. and Carballo, J. Factors Involved in Digitalis Sensitivity in Chronic Pulmonary Insufficiency. *Am. Heart J.*, 57:460, 1959.
8. Wolff, L. Syndrome of Short P-R Interval with Abnormal QRS Complexes and Paroxysmal Tachycardia (Wolff-Parkinson-White Syndrome). *Circulation*, 10:282, 1954.
9. Somlyo, Andrew P. The Toxicology of Digitalis. *Am. J. Cardiology*, 5:523, 1960.

10. Kay, Calvin F. The Clinical Use of Digitalis Preparations. *Circulation* 10:291, Aug. 1955.
11. Crouch, R. B., Herrmann, G. R., and Jeitmancik, M. R. Digitalis Intoxication. *Texas J. Med.*, 52:714, 1956.
12. Friedberg, Charles K., and Donoso, Ephraim. Progress in Cardiovascular Diseases, 2:408, 1959-60.
13. Garb, S. and Venturi, V. The Differential Actions of Potassium on the Therapeutic and Toxic Effects of Ouabain. *J. Pharmacol. and Exper. Therap.*, 112:94, 1954.
14. Lown, B., Whipple, G. H., Craig, L. C. and McLemore, G. The Protective Effect of Potassium Administration Against the Toxic Action of Digitalis. In Preparation.
15. Lown, B., Whipple, G. H., Shoemaker, W. C., Craig, L. C. and Levine, S. A. Role of the Liver in Digitalis Induced Electrolyte Shifts. *Circulation*, 18:753, 1958 (abstract).
16. Lown, B. and Caner, E. Z. J. Unpublished observations.
17. Lown, B., Black, H., and Moore, Francis D. Digitalis, Electrolytes, and the Surgical Patient. *The Am. J. of Cardiol.*, 6:309, 1960.
18. Shrager, Morton W. Digitalis Intoxication. *Archives Int. Med.*, 100:881, 1957.
19. Kay, Calvin F. The Clinical Use of Digitalis Preparations. *Circulation*, 10:291, Aug. 1955.
20. Stewart, H. J. and Smith, J. Changes in the Electrocardiogram and in the Cardiac Rhythm During the Therapeutic Use of Potassium Salts. *Am. J. M. Sc.*, 201:177, 1941.
21. Somlyo, A. P. Unpublished observations.
22. Bellet, S., Hamdan, G., Somlyo, A. and Lara, R. The Reversal of Cardiotoxic Effects of Quinidine by Molar Sodium Lactate: An Experimental Study. *Am. J. M. Sc.*, 237:165, 1959.
23. Eliot, Robert S., Blount, S. G. Jr. Calcium, Chelates, and Digitalis, a Clinical Study. *Am. Heart J.*, 62:7, 1961.

ABSTRACTS

"Lipochrome" Hepatosis without Jaundices Variant of Dubin-Johnson Syndrome—E. R. Burka, I. B. Brick, and H. R. Wolfe

Amer J Med Sci—Vol. 242:746 (Dec.) 1961

A case is reported in which hepatic pigmentation, pathognomonic of the Dubin-Johnson syndrome, was found, but the patient never had clinical or biochemical evidence of hyperbilirubinemia. The only clinical evidence of liver disease in this case was a moderate hepatomegaly, and the only abnormal liver function test was retention of bromsulfalein dye. There was no family history of chronic jaundice. Cholecystography was normal. In the previous cases of the Dubin-Johnson syndrome chronic or recurring jaundice has always been present in the patients, however, there have been reported cases of conjugated hyperbilirubinemia without pigmentation in the liver. It is suggested that this case, as well as those previously described with conjugated hyperbilirubinemia without hepatic pigmentation, represents a variant of the hepatic excretory abnormalities characteristic of the Dubin-Johnson syndrome. Apparently, the syndrome exists as a spectrum of excretory abnor-

malities, either separately determined but closely linked, or it exists in many partial and incomplete forms.

Clinical Course in 250 Gastric Ulcer Patients—D. A. DeLaurentis and G. P. Rosemond

Arch Surg—Vol. 83:674 (Nov.) 1961

In order to make an intelligent decision in the management of future patients, a 10-year review of 250 consecutive patients with gastric ulcer was undertaken. Twelve patients proved to have a "malignant ulcer." During this same period, there were 301 proven gastric malignancies. Consequently, a clinically benign gastric ulcer which proved to be malignant, accounted for a small fragment (4%) of gastric cancer. A 2- to 12-year follow-up study on 72 non-operated patients revealed that 22 were asymptomatic. Thirty-six patients were symptomatic and approximately half of these required subsequent surgery. Seven died of unrelated causes, 4 died of unknown causes, 2 died of massive ulcer hemorrhage, and 1 died of probable gastric cancer. Resection should be carried out in the majority of gastric ulcers, even if its malignant potential is ignored.

ELECTROCARDIOGRAM



OF THE MONTH

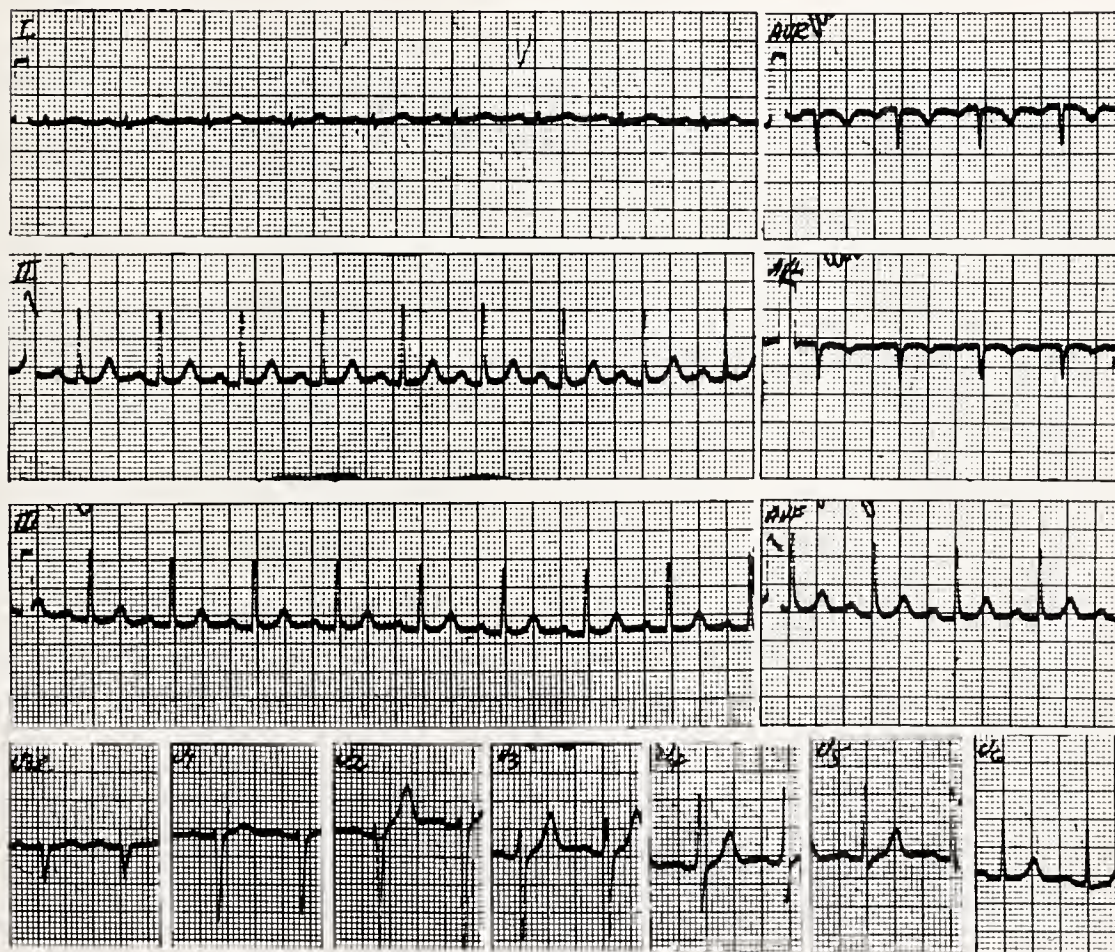
WHAT IS YOUR INTERPRETATION?

AGE: 47 SEX: F BUILD: SLENDER BLOOD PRESSURE: 170/110

MEDICATION: None

HISTORY: Shortness of breath on exertion.

Answer on Page 353



Prepared by J. S. Taylor, M.D., Professor of Medicine

The Department of Medicine

University of Arkansas Medical Center



Can we measure the patient's comfort?

The physician can measure the basal metabolic rate by means of oxygen consumption. But he has no instrument—no objective test—for measuring comfort.

For this, he must depend upon his own powers of observation and the patient's own description of how he feels.

Because these are, admittedly, subjective criteria, the validity of results hinges entirely on the experience and objectivity of the investigators involved.

Such well-qualified clinicians have reported that a new corticosteroid developed in the research laboratories of Upjohn actually raises the level of relief obtainable with this type of therapy.

This difference cannot be "proved." It must be seen. And the only practical way for you to do this is to evaluate this new drug critically in your own practice. Please do, at your first opportunity. We are confident that you will be glad you did.

The new corticosteroid from Upjohn research

Alphadrol

Each tablet contains Alphadrol (fluprednisolone) 0.75 mg. or 1.5 mg.
Supplied in bottles of 25 and 100.

The anti-inflammatory activity of Alphadrol is comparable to the best effects obtained in current practice. Results obtained with Alphadrol have been such as to warrant classifying it among the most efficient steroids now available.

More than twice as potent as prednisolone, Alphadrol exhibits no new or bizarre side effects. Salt retention, edema or hypertension, potassium loss, anorexia, muscle weakness or muscle wasting, excessive appetite, abdominal cramping, or increased abdominal girth have not been a problem.

Indications and effects

The benefits of Alphadrol (anti-inflammatory, antiallergic, anti-rheumatic, antileukemic, antihemolytic) are indicated in acute rheumatic carditis, rheumatoid arthritis, asthma, hay fever and allergic disorders, dermatoses, blood dyscrasias, and ocular inflammatory disease involving the posterior segment.

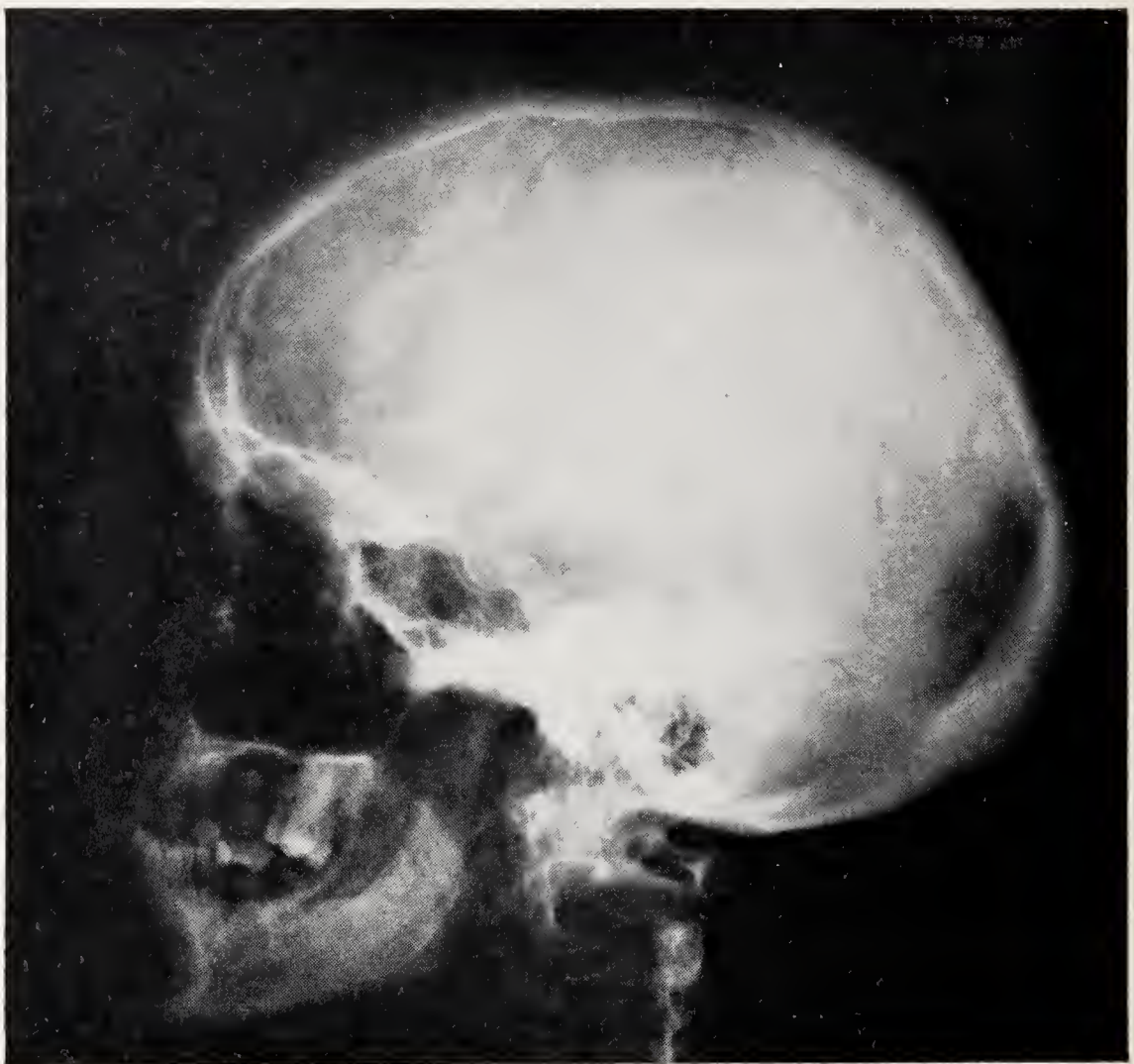
Precautions and contraindications

Patients on Alphadrol will usually experience dramatic relief without developing such possible steroid side effects as gastrointestinal in-

tolerance, weight gain or weight loss, edema, hypertension, acne or emotional imbalance.

As in all corticotherapy, however, there are certain precautions to be observed. The presence of diabetes, osteoporosis, chronic psychotic reactions, predisposition to thrombophlebitis, hypertension, congestive heart failure, renal insufficiency, or active tuberculosis necessitates careful control in the use of steroids. Like all corticosteroids, Alphadrol is contraindicated in patients with arrested tuberculosis, peptic ulcer, acute psychoses, Cushing's syndrome, herpes simplex keratitis, vaccinia, or varicella.

WHAT IS YOUR DIAGNOSIS?



*Prepared by the
Department of Radiology, University of Arkansas
School of Medicine, Little Rock*

ANSWER ON PAGE 397



PUBLIC HEALTH AT A GLANCE

REPORT OF FIRST FOUR YEARS OF OPERATION OF THE ARKANSAS CHILD DEVELOPMENT CENTER

The Arkansas Child Development Center, an evaluation center for children suspected of being mentally retarded, has been in operation since the summer of 1957. The Center is set up to provide medical, psychological, and social diagnostic evaluations and parent counseling, play therapy, and follow-up contacts as indicated for these children. The Center is administered by the Maternal and Child Health Division of the State Board of Health and is supported entirely by a Special Project Grant from the Children's Bureau. No charges are made for services at the Center. Medical treatment is not provided by the Center. When medical treatment seems indicated the child is referred to his physician. The Center has been working with private physicians on medications, particularly those useful for behavior control. Because of the importance of early diagnosis and early developmental evaluations to parents and professional personnel working with such children, priority is given to the preschool and young school age children up to 7 years of age. Older children are seen when possible, particularly if these children are presenting special problems and psychological testing is important to professional personnel and agencies working with them.

Routinely, the child and his parents are seen by the psychologist, medical social worker, and pediatrician. At the time the child and his family are seen, reports are available from the agencies and professional personnel who have been caring for the child. Following these contacts, there

is a staff meeting to discuss the case and plan counseling and follow-up. The interpretive interview is usually given to the parents on the day of evaluation. If more information is needed, a preliminary report is given and plans made to arrange for other studies and contacts. Often diagnostic procedures such as EEG's X-rays, or laboratory tests are indicated. These can be obtained through the center. When medications seem indicated the pediatrician at the center will refer this to the child's physician and will be available for consultation. The Center sees many children served by Crippled Children's Division, Child Welfare, the Hearing and Speech Center, the Arkansas School for the Blind, and the Arkansas School for the Deaf, and special education classes. Frequently, prior to the report to the parents, contacts are made with these agencies or with the child's physician. In all cases, close liaison is maintained with other agencies and physicians caring for the children. With parental permission, written reports are sent to them; and frequently direct contact is also made by one of the Center staff. Local public health nurses are quite active in working with many of the children seen at the Center and in assisting in follow-up. In serving the mentally retarded, public health nurses made 1,073 home visits in 1960.

When indicated and when feasible, parent counseling and play therapy are provided at the Center. Counseling at the Center has the following objectives: (1) Assistance of the parents in understanding and accepting the condition of the

child, and (2) Counseling the family regarding the specific methods of training and education at home, ways of managing behavior problems, and ways of preparing the child for adjustment outside the home. (3) Aiding parents in selection of the proper training or education to be sought for the child and counseling in regard to long range goals. (4) Assisting the family in so arranging and adjusting the home and family activities that the child can be cared for with maximum benefit to the child and to the rest of the family. (5) Assistance to the parents in maintaining optimum general health. It is recognized that this can be done only by working closely with the family and

with the physician, nurses, teachers, and other workers who are seeing the child and his family. The chart shows the source of referral for the four 12 month periods since the beginning of operation at the Center, and the total number of children seen. "Welfare Department" referrals include referrals from Crippled Children's Division and from Child Welfare Division. Other agencies include the School for the Blind, School for the Deaf, Hearing and Speech Center, trainable classes, the Day Care Center, special education classes, and the Medical Center. Often more than one agency is involved in the referral, as well as the care of the child.

ARKANSAS CHILD DEVELOPMENT CENTER
Children Evaluated and Source of Referral

| Time Period | Health
Depts. | Physicians | Welfare
Dept. | Other
Agency | Parents | School | Total
Children
Eval. |
|----------------------------------|------------------|------------|------------------|-----------------|---------|--------|----------------------------|
| May 1, 1957
to
May 1, 1958 | 21 | 11 | 26 | 17 | 34 | 16 | 125 |
| May 1, 1958
to
May 1, 1959 | 43 | 23 | 48 | 29 | 58 | 28 | 229 |
| May 1, 1959
to
May 1, 1960 | 47 | 59 | 81 | 39 | 37 | 18 | 281 |
| May 1, 1960
to
May 1, 1961 | 74 | 49 | 126 | 5 | 51 | 33 | 338 |

Total children seen May 1, 1957 to May 1, 1961: 973

RESOLUTIONS



The American Medical Association House of Delegates at its meeting in Denver on November 23, 1961 adopted the following resolution honoring the memory of Dr. Fount Richardson of Fayetteville, Arkansas.

Whereas, God in His infinite Wisdom, did on November 23, 1961, call to his eternal reward, our esteemed colleague, friend and fellow Delegate, Fount Richardson; and

Whereas, Mere words are inadequate to portray the manner in which he devoted his life to the care of his patients and the relief of their pain and suffering; and

Whereas, He rendered outstanding service and leadership to the activities of Organized Medicine, having served in many capacities including the following: President and Secretary, Washington County Medical Society; Councilor, Editor and President, Arkansas Medical Society; Secretary, Editor and President, Arkansas Chapter, American Academy of General Practice; Director, Chairman of Board and President, American Academy General Practice; Director, Chairman of Board, Southern Medical Association, and at the time of his death was President-Elect, Southern Medical Association and a member of this House of Delegates; and

Whereas, his untimely death at the age of 61 years creates a deep sense of personal loss to his associates, to this House of Delegates, and to the Community and his Alma Mater, which he had so faithfully served, and more especially to his family; therefore be it

Resolved, That this House of Delegates of the American Medical Association, pause in silent tribute to the memory of Fount Richardson; and be it further

Resolved, That a message of sympathy be transmitted to his wife and son prior to the funeral to be held this P.M.; and be it further

Resolved, That a copy of this resolution be published in the minutes of the House of Delegates of the American Medical Association, and copies thereof be transmitted to the family of Dr. Richardson.

ABSTRACTS

Effect of Thiazides on Carbohydrate Metabolism in Patients with Hypertension—A. P. Shapiro, T. G. Benedek, and J. L. Small

New Engl J Med—Vol. 265:1028 (Nov. 23) 1961

Glucose tolerance and the response to intravenous tolbutamide were determined in a group of elderly hypertensive subjects without clinical diabetes mellitus, before and during the administration of thiazide drugs in therapeutic doses. It was demonstrated that subjects with potential diabetes, as determined by family history and previous glucose tolerance tests, usually developed a further impairment of carbohydrate metabolism and, in some, clinical diabetes mellitus was precipitated. Significant changes were not noted in nondiabetic controls. The effect may be related to a peripheral disturbance in metabolism of glucose. Analysis of the clinical characteristics of "thiazide diabetes" in 5 patients is included in this report.

Hyperbilirubinemia Following Administration of Gallbladder Dye—R. J. Bolt, R. S. Dillon, and H. M. Pollard

New Engl J Med—Vol. 265:1043 (Nov. 23) 1961

Elevation of total serum bilirubin levels in patients undergoing routine check-up examinations was unexpectedly encountered. All patients with unexplained elevation of total serum bilirubin levels had been given gallbladder dye the evening before blood was drawn for bilirubin determinations. The bilirubin levels returned to normal 24 to 48 hours after the dye had been administered. No elevation of the 1 minute direct fraction was noted. Reports by other authors have shown a similar retention of BSP following the administration of gallbladder dye. The dye used was bunamiodyl sodium. Similar studies employing iopanoic acid (Telepaque) did not show total bilirubin or BSP retention. It is suggested that that bunamiodyl sodium may either block the cellular uptake or the esterification of bilirubin and BSP. If unexplained elevation of bilirubin is found it should be noted whether gallbladder x-ray had been carried out in the previous 48 hours.



EDITORIAL

THE RED CROSS BLOOD PROGRAM

Sam T. Gibson, M.D.

This is a brief description of the Red Cross Blood Program—its size, scope and achievements.

Each year, some two and one half million units of blood are obtained from volunteer donors at one of the Red Cross blood collecting sites. This annual rate of collections makes our's the largest single blood program in the world. To successfully accomplish this, the participation and support of many thousands of people are required—donors, professional staff members and trained volunteers.

People who donate blood to the Red Cross come from all walks of life and from all parts of the country. However, they all have one thing in common. They believe in sharing some responsibility to see that an adequate supply of blood is available in their community and in this being a voluntary activity.

Even before the opening of the new Arkansas Red Cross Blood Center in Little Rock later this year, certain of our citizens have participated in one way or the other in surrounding programs. Washington County is a part of the Springfield Regional Blood Program and supports mobile unit visits from the Springfield Center. In addition, almost two thousand (1,962) units of Red Cross blood were provided to eighteen Arkansas hospitals and blood fractions of serum albumin, gamma globulin, fibrinogen were made available to physicians and the state health department (see Table I for quantities).

TABLE I

1959-1960 Quantity of Red Cross Blood and Blood Products Distributed Within State of Arkansas

| | |
|------------------|--------------------|
| Whole Blood | 1,968 |
| Serum Albumin | 58 (100 ml.) units |
| Gamma Globulin | 3,600 ml. |
| Fibrinogen | 9 (2 gm.) |
| Packed Red Cells | 2 (250 ml.) |

The network of fifty-five Red Cross programs makes possible the production and distribution of these blood fractions, since unusable whole blood is pooled from all regions and sufficient quantities obtained to be processed into these valuable products in a practical and economical manner.

In fact, the Red Cross Blood Program now supplies a third of all the gamma globulin, over half of all the serum albumin, and nine-tenths of all of the fibrinogen used in this country. Last year, a new product was added to the derivatives family—vaccinia immune globulin. The Red Cross is now the sole supplier in North America of this special preparation obtained from blood provided by the Armed Forces from recently vaccinated servicemen.

In addition to its large scale collection program, the Blood Program carries on an active Research Program. Several areas are under investigation, including methods of extending the preservation of whole blood, the identification and separation of new blood fractions and the lo-

cation and preservation of bloods of rare types. To accomplish the above, a national laboratory has been established in Washington, D.C. with branch laboratories in Los Angeles and New York.

However, the primary objective of the program continues to be directed toward meeting whole blood needs of the participating hospitals. It has been estimated that every minute of every day, over 10 bottles of blood are used in this country to treat the ill and injured. The Red Cross is currently providing over 40% of this blood. Most of this is obtained at temporary collection sites. Technical equipment and supplies, and a unit of trained staff travel about the region on a scheduled basis, and with the cooperation and assistance of local Red Cross volunteers, turn church basements, school auditoriums and office buildings into smoothly functioning mobile unit operations.

To extend the services of the program, Red Cross also participates in a reciprocity program not only between Red Cross centers, but with non-Red Cross blood banks. Last year, 41,000 patients received reciprocity service, involving 103,710 bottles of blood. Most of this activity was handled by the transfer of paper credits. We believe reciprocity is a vital service of the Blood Program.

This is a stimulating, demanding, dynamic program that offers many challenges for the future. We have only begun to learn about the fractions of blood and their uses, and the surgical miracles that adequate sources of blood make possible. One thing we have learned—the people of this country respond to the challenge — and give not only their money and their services, but their blood. The Blood Program is a real example of community effort and shared responsibility.

FOUNT RICHARDSON: AN APPRECIATION

W. R. Brooksher, M.D.

In the course of a lifetime man meets vexations, trials, sorrows, joy and a general bewilderment. The great majority plod with varying degrees of determination through these perplexities with little gained or shared. There is the occasional and unusual man who meets the challenges of the world with hope in his soul, courage in his heart and a vigor to conquer the obstacles which hinder his attainment of the full life, the betterment of the world about him and the achievement of his ultimate destiny as a truly great man.

Such an individual was the unreconstructed Rebel—Fount Richardson. To him the dawn of a new day brought the opportunity of bringing into reality the dreams which typified his search for almost Utopian accomplishments. Each day gave him anew the delight of daring the fates to

thwart his consistent and purposeful aim to make that day the best of many happy ones, to do good for those about him and to further prepare himself for what tomorrow would bring.

The medical profession was his second great love. To him it was more than a science, more than the art of practice; it was the noble calling and never did he lose sight of his mission to cure, relieve and comfort the ailing. His devotion to organized medicine was recognized by his colleagues in his selection to many honored offices of trust and responsibility.

Fount is gone to a better world, we are told, but in departing he left for us a world which is infinitely better for his presence, guidance, friendly counsel and abundant good nature.

It was our great pleasure and honored privilege to call him Friend.

MEDICINE IN THE



Medical Care Under Kerr-Mills Program Starts in Hot Springs

A number of Hot Springs persons are already receiving treatment under provisions of the Kerr-Mills medical treatment program to the aged, Dr. Cecil Parkerson, President of the Garland County Medical Society has announced.

The program became effective September 15, 1961, following passage by Congress of a bill authored by U. S. Senator Kerr of Oklahoma and Arkansas' Senator Wilbur Mills. The bill was backed by the American Medical Association, which had opposed passage of the King-Anderson measure.

"It was our feeling that the Kerr-Mills bill would help people in the low income bracket receive medical care and to whom any illness would be a financial burden, but who are not on public welfare rolls," Dr. Parkerson said. The Arkansas Medical Society has promoted its implementation in Arkansas.

On the other hand, passage of the King-Anderson bill would have put everybody over 65 years of age who draws social security on free government medical care," he said.

"That bill would have given the financially independent person a free medical ride at the taxpayers' expense as well as the indigent and those in the lower income group. To us it was very foolish and unnecessary and would mean a jump in the social security tax of at least 10 percent."

The Kerr-Mills Program helps aged persons pay for office calls to the doctor and helps him with hospitalization and with nursing home care.

Dr. Parkerson estimated that between 30,000 and 50,000 persons in Arkansas are eligible for help under provision of the bill which will be administered on a state rather than at the federal level. Approximately six million dollars had

been appropriated for the state program, it was said.

Applicants will be screened through county welfare offices. The Garland County Welfare department declined to reveal the number of applicants or the number now receiving treatment under the program but admitted that some had applied and some were being treated.

Dr. Parkerson is strongly urging that those eligible to receive the treatment contact the welfare office. "This program is not a complete 'pay-off'," he said, "but will help with the payment of medical bills."

Who are the eligible? Dr. Parkerson explained that a single person must not have an income exceeding \$1,200 annually or a couple more than \$1,500 annually. They must not own a home the value of which is more than \$7,500. A single person must not have available cash exceeding \$300; a couple \$600. A single person or a couple also must not have personal property valued in excess of \$2,500. All must be 65 years of age or older.

The state pays 90 percent of the cost of hospitalization and the same percentage for nursing care. Any changes in the program, the physician said, depend, of course, on the amount appropriated by the state legislature for that purpose.

* * *

The University of Arkansas Poison Control Center

The University of Arkansas Medical Center, in cooperation with the Arkansas State Medical Society, the Arkansas Academy of Pediatrics and the Arkansas State Board of Health, has a Poison Control Center to serve the physicians of the state with information regarding the diagnosis and management of poisonings. The Center is operated under the auspices of the Department of Pediatrics and is set up so that any physician

can telephone the Poison Control Center at any time of the day or night and within minutes obtain information on the composition of a given poison and recommendations regarding management, if desired or requested. Only medical personnel, hospital representatives or closely allied sciences (e.g., dentists, veterinarians) will be given information over the telephone. Lay persons are given emergency instructions only and then referred to their family physician or to the nearest available physician, as determined by a distribution map.

Emergency outpatient services are available on a 24 hour a day basis for indigent cases and where requested by private physicians and for emergency services where private physician is delayed or unavailable.

The University of Arkansas Medical Center encourages the use of the facilities of the Poison Control Center by the private physicians of the state.

* * *

THE MONTH IN WASHINGTON

Washington, D.C.—The Kennedy Administration and other main supporters of medical care of the aged under social security are preparing to make an all-out effort to push the legislation through Congress in the 1962 session.

Their campaign poses a serious challenge to the medical profession and its allies in the fight against such compulsory government health schemes.

It is too early to evaluate the effect on the legislation of changes in House Democratic leadership and House Ways and Means Committee membership. The White House has been exerting pressure in an effort to have a congressman supporting its views named as a replacement for Rep. Frank Ikard (D. Tex.), who resigned. Ikard opposed proposals to put health care under social security.

Administration officials from President Kennedy down publicly gave the Administration medical care legislation, the King-Anderson bill, top priority for the 1962 session. During the interim after the adjournment of the 1961 session, the Administration held a political roadshow in key cities in an effort to build up public support for the King-Anderson bill and other Administration proposals that did not fare so well in Congress. At a number of the so-called White House

Regional Conferences, physicians forcefully expressed the medical profession's opposition to putting health care under social security.

The AFL-CIO geared for a renewed fight for the Administration legislation. A new national organization of the elderly has been formed with the main purpose of lobbying for the King-Anderson bill. It is the National Council of Senior Citizens for Health Care Through Social Security. Former Rep. Aime J. Forand (D., R.I.), who sponsored such legislation when he was in Congress, was the leading figure in organizing the group and is national chairman.

On the other side of the fight, there also is a new organization—The American Medical Political Action Committee. It is a non-profit, voluntary, non-partisan, unincorporated committee setup last May with the approval of the A.M.A. Board of Trustees. AMPAC—which functions independently of medical organizations and societies whether at the national, state or local level—was organized to meet “an unmet need—the need of providing the medical profession with an opportunity to assume a more active and effective role in public affairs.” The A.M.A. Board of Trustees House of Delegates at Denver, in November urged that all physicians, their wives and interested friends join AMPAC and similar political action committees in their states and communities.

Dr. Leonard W. Larson, A.M.A. president, warned the House of Delegates that physicians “are engaged in a historic struggle to preserve our country's unique system of medical care and our stature as a profession.” He said both are “seriously threatened” by such legislative proposals as the King-Anderson bill.

Dr. Larson said that the A.M.A. could expect “even more bitter attacks” than those so far from Administration and AFL-CIO spokesmen. He appealed to physicians to support medicine's friends in Congress with money and personal campaign assistance. He noted that AMPAC provides “a national mechanism through which physicians and their families can channel funds for strategic placement where the money will do the most good.”

A leading congressional opponent of health care under social security also warned of the seriousness of the fight ahead. Sen. Wallace F. Bennett (R., Utah), a member of the Senate Finance

Committee which handles such legislation, told students at Harvard University Medical School that there undoubtedly would be "a determined drive to rush H.R. 4222 (the King-Anderson bill) through the Congress" in 1962.

"The propagandists who are behind the determined drive for a system of socialized medicine have latched on to an emotional appeal in trying to push this legislation through the Congress," Bennett said. "They have tried to create a public image that the A.M.A. and any individual who opposes this plan is motivated by selfish interests.

"As one who is vigorously opposed to compulsory Federal medical care, I resent the tactics used by those who advocate this system of socialized medicine. There is an answer to this problem of meeting the medical needs of our aged, and I frankly believe that it is being honestly met by our present voluntary health insurance programs and by the cooperative federal-state aid to our needy aged who are incapable of paying their own medical expenses.

"I am opposed to H.R. 4222 or other bills which would open the flood gates to a system of compulsory medical care, directed first to our aged, but which, once instituted, would surely by political pressure be expanded to all of our population. The battle over this legislation in this next Congress is bound to be hectic and monumental. It is a battle we can't afford to lose."

* * *

Medical Care Distribution Is Problem

The hand-in-hand progress of medical research, medical education and medical care has created a glow of unparalleled health in America, but it has also created a problem.

Dr. A. McGehee Harvey, head of the department of medicine at Johns Hopkins University, discussed the problem in an interview in Little Rock. He was the featured speaker at the dedication of the Barton Institute for Medical Research, a \$2.2 million facility that is the newest addition to the growing University Medical Center complex.

The problem: Distribution of Medical Care.

Research has advanced medicine tremendously. There is now so much knowledge available that "it is virtually impossible for an individual to know more than just a small field," Dr. Har-

vey explained. Where does this leave the general practitioner, or "family physician," as Dr. Harvey prefers to call him? "He's just as important as ever," Dr. Harvey said, but his role has changed from the old days when he treated every ailment and took care of all the surgical procedures his patients required. Today, he is emerging as, in the words of Dr. Harvey, "a friend of the family to get you off in the right direction."

"The family physicians knows you, knows your personality—he's going to have to plug you into the right hole on the switchboard of medical knowledge". This means referral to the specialist who can treat the particular ailment you have. Dr. Harvey said the family doctor will serve as the "final link in the chain" to draw on pools of medical knowledge for answers to patients' problems.

Dr. Harvey said he didn't mean the family physician won't continue to treat patients, but he repeated that research has provided so much knowledge about each narrow area of medicine that the family physician for that one case in his lifetime, he might see of a particular rare condition, can find a specialist in that field who sees many.

The dedication of the Barton Institute for Medical Research was held in the University Medical Center Auditorium. Dr. David W. Mullins, University of Arkansas president, Governor Faubus, Reps. Oren Harris and Dale Alford, Storm Whaley, University of Arkansas vice president of health sciences and others were on the program.

* * *

Report on Actions of the House of Delegates American Medical Association Fifteenth Clinical Meeting Denver, Colorado

DENVER—Social Security health care, relations with the American College of Surgeons, organization of the American Medical Political Action Committee, medical discipline and polio vaccine were among the major subjects acted upon by the House of Delegates at the American Medical Association's Fifteenth Clinical Meeting held Nov. 26-30 in Denver.

Sounding the keynote for the Association's campaign to oppose enactment of the King-Anderson type of legislation in 1962, Dr. Leonard

W. Larson of Bismarck, N.D., AMA president, told the opening session of the House that proposals to incorporate health care benefits into the Social Security system "would certainly represent the first major, irreversible step toward the complete socialization of medical care."

The House of Delegates gave enthusiastic approval to Dr. Larson's address and took several actions reaffirming strong support for the Kerr-Mills program to aid the needy and near-needy aged, and urging a concerted, determined fight against Social Security health care proposals in Congress.

The House advised all state and county medical societies to recognize the impending threat and to prepare now for any eventuality by continuing to oppose any scheme which tries to impose a substandard system of medical care on the American people.

American College of Surgeons

The House agreed with the intent of five resolutions which expressed strong dissatisfaction over recent statements by a spokesman for the American College of Surgeons, and it also approved a Board of Trustees report informing the House that arrangements have been made for a meeting with the ACS Board of Regents to discuss that organization's recent statements and policy positions. The report expressed hope that the meeting "will lead to a unification of effort in behalf of American medicine."

The House instructed the Board of Trustees to take the five resolutions to the meeting and to report to the delegates as soon as possible on the results of the meeting.

American Medical Political Action Committee

The House heartily approved the purposes and goals of the recently-organized American Medical Political Action Committee and urged all physicians, their wives and interested friends to join AMPAC and other political action committees in their states and communities.

The purposes of AMPAC, which is an organization separate and distinct from the American Medical Association as required by federal law, are:

1. To promote and strive for the improvement of government by encouraging and stimulating physicians and others to take a more active and effective part in governmental affairs.

2. To encourage physicians and others to understand the nature and actions of their government as to important political issues and as to the records and positions of political parties, officeholders and candidates for elective office.

3. To assist physicians and others in organizing themselves for more effective political action and for carrying out their civic responsibilities.

4. To do any and all things necessary or desirable for the attainment of the purposes stated above.

Medical Discipline

The House received from the Council on Constitution and Bylaws a proposed amendment which would have made it possible to implement a recommendation by the Medical Disciplinary Committee that was approved by the House at the June, 1961, meeting. This recommendation was to change the bylaws so as to confer original jurisdiction on the Association to suspend and/or revoke the AMA membership of a physician found guilty of violating the Principles of Medical Ethics or the ethical policies of the Association, regardless of whether or not action has been taken against him at the local level. However, after considerable discussion on the floor of the House, the proposed amendment was referred back to the Council on Constitution and Bylaws.

In another action on medical discipline the House approved the expanded activities of the Judicial Council, which has taken over permanent responsibility in that area, and said that the Council program should benefit all physicians, the public and the profession.

Polio Vaccine

The House adopted a resolution which urged that medical societies at the local, county, district or state levels throughout the United States should encourage, stimulate and participate in surveys to determine the percentage of individuals in each community who have undergone immunizing procedures for poliomyelitis.

The resolution stated that on the basis of the results of the surveys, the local medical society should determine the type of vaccine and the most effective type of program which will be of greatest benefit to the public.

Until such time as all three types of oral vaccine are available, the resolution concluded, the Salk vaccine should be the vaccine of choice for

routine poliomyelitis immunization, with the choice of program for administering the vaccine to be determined on a local basis by each county medical society.

Miscellaneous Actions

In considering a wide variety of resolutions and annual and supplementary reports, the House also:

Disapproved of two proposals which would have required that *resolutions* be introduced 30 and 45 days, respectively, before Association meetings.

Approved a statement that physicians have an *ethical obligation* to participate in medical society activities and express their opinions fully and freely.

Reaffirmed AMA policy that it is not considered unethical for a physician to own or operate a *pharmacy* provided there is no exploitation of the patient.

Agreed with the Judicial Council that the physician himself is responsible for the control and custody of *drug samples* once they come into his possession, and in the high tradition of the medical profession he should not dispose of them in any way that could cause harm to others.

Commended those constituent medical societies which have moved forward in the area of *human relations* by eliminating membership restrictions based on race or color. In connection with the same subject, Dr. Peter Murray of New York City, retiring after 12 years of service in the House, told the delegates in a farewell address that Negro physicians now have some kind of medical society membership in every state except one.

Approved a recommendation that a special House committee be appointed to investigate all facets of the operation of the *Joint Commission on Accreditation of Hospitals*.

Agreed with the Board's choice of Miami Beach, Florida, as the site for the *1964 Clinical Meeting*.

Approved the combining of the American Medical Education Foundation and the *American Medical Research Foundation into the American Medical Association Education and Research Foundation*, effective next January 1.

Deferred action on a proposed study of *fund raising* by voluntary health agencies, pending the development of additional information by the AMA Committee on Voluntary Health Agencies.

Reaffirmed the previous policy that physicians should have the privilege of prescribing drugs by either *generic or brand name*.

Approved the principle of *income tax deductions* for medical care of the aged.

Recommended, in reviewing the *Medicare Program*, that all county medical societies in the area surrounding armed forces hospitals make a serious attempt to establish formal liaison with the physicians on those hospital staffs.

Endorsed the administration of indigent medical care programs developed in cooperation with local medical organizations as a legitimate activity of *state and local health departments*.

Urged the elimination of all "categories" in programs of *assistance to the needy* at the federal and state level, with all assistance provided through a single program.

Referred to the Council on Medical Service a resolution proposing the use of state and federal tax funds to provide voluntary prepayment health insurance protection for the aged. In a related action the House approved of experimentation with *prepayment plans* under assistance programs.

Urged more vigorous promotion of voluntary non-profit prepayment health plans.

Urged every physician in the United States to use automobile *seat belts*.

Recommended, as a civil defense measure, a *mass immunization* program for the general public.

Suggested that the Board of Trustees continue its negotiations to develop a group *disability insurance* program for AMA members.

Concurred in the Board's appointment of a special committee to study the organizational status of *AMA Sections*, the functions of the Scientific Assembly and existing procedures for establishing medical certifying boards.

Instructed the Council on Medical Education and Hospitals to study the present and potential contribution of the *American Board of Abdominal Surgery* to the advancement of the art and science of surgery and the betterment of public health, to determine whether it should be approved as a recognized examining board.

Approved and commended the objectives and program submitted by the Committee for Liaison with *National Nursing Organizations*.

Recommended that the Secretary of Defense consider the advisability of developing a training program for *reserve medical officers*.

Awards and Donations

The AMA Board of Trustees presented a special citation to the producers and cast of The Donna Reed Show for its "contribution to public understanding of the high ideals of the medical profession." Carl Betz, who portrays Dr. Alex Stone on the television show, received the award from Dr. Hugh H. Hussey Jr., AMA Board chairman, at the Wednesday Session of the House.

Contributions totaling \$435,275.93 from physicians in six states were presented to the American Medical Education Foundation during the opening session on Monday.

Registration

Final registration at the meeting reached a total of 6,138, including 2,976 physicians.

* * *

Application Activity and MCAT Data of Applicants to the Class of 1960-61*

The number of students accepted for enrollment in U.S. medical schools in 1960-61 increased the total by 48 over last year. This is the sixth consecutive yearly increase, in this instance the direct result of welcoming the University of Kentucky College of Medicine to the roster of U.S. medical schools (see Table 1). This addition is

*Submitted by the Division of Basic Research of the AAMC, 2530 Ridge Avenue, Evanston, Illinois.

less than 1 per cent of the 8,560 students receiving acceptances; however, similar increases can now be anticipated almost yearly as the nation's universities endeavor to meet the medical manpower needs of the population. In contrast, the total number of applicants dropped to 14,397, the fourth such decrease in numbers since 1956-57, and a loss of approximately 4 per cent from 1959-60.

In view of the continued and growing attractions that other disciplines offer, it is not unlikely that the current trend will continue. Although absolute numbers of applicants may increase as a result of increasingly larger enrollments in undergraduate colleges, comparable increases in the total number of accepted applicants can also be anticipated as a function of the development of new schools of medicine. The last century has witnessed a growth in the number of professional personnel which is over 3½ times faster than that of the general population growth for the nation. In this context John W. Gardner, President of the Carnegie Corporation, notes that, "The demand grows out of the nature of our society . . . We are just beginning to understand that one of the distinguishing marks of a modern, complex society is its insatiable appetite for educated talent." If this generalization is true, medicine can anticipate even greater competition in the future.

Table 2 indicates that the pattern of application activity has not yet adversely affected the quality of accepted applicants. The mean of the

TABLE 1
SUMMARY OF APPLICATION ACTIVITY DURING THE PAST 14 YEARS

| 1st Year Class | Applications to Medical Schools | | | Accepted Applicants |
|----------------|---------------------------------|--------|----------------|---------------------|
| | Applicants | Total | Per Individual | |
| 1947-48 | 18,829 | 56,279 | 3.0 | 6,512 |
| 1948-49 | 24,242 | 81,662 | 3.4 | 6,973 |
| 1949-50 | 24,434 | 88,244 | 3.6 | 7,150 |
| 1950-51 | 22,279 | 81,931 | 3.7 | 7,254 |
| 1951-52 | 19,920 | 70,678 | 3.5 | 7,663 |
| 1952-53 | 16,763 | 56,319 | 3.4 | 7,778 |
| 1953-54 | 14,678 | 48,586 | 3.3 | 7,756 |
| 1954-55 | 14,538 | 47,568 | 3.3 | 7,878 |
| 1955-56 | 14,937 | 54,161 | 3.6 | 7,969 |
| 1956-57 | 15,917 | 59,798 | 3.8 | 8,263 |
| 1957-58 | 15,791 | 60,951 | 3.9 | 8,302 |
| 1958-59 | 59,170 | 59,102 | 3.9 | 8,366 |
| 1959-60 | 14,952 | 57,888 | 3.9 | 8,512 |
| 1960-61 | 14,397 | 54,662 | 3.8 | 8,560 |

1960-61 applicant scores on the MCAT subtests are generally equivalent to last year's averages for accepted, rejected, and total applicant groups alike.

Slight increases in the Quantitative Ability and Science Achievement mean scores of the accepted applicants parallel similar increases in the total applicant group so that no inferences can be made regarding an increased interest in these scores by the admissions committees. Further, the increases are minor and may be attributable only to yearly fluctuations.

The critical question remains one of projecting current short-range trends in the medical manpower pool. Presently both short-and long-range trends presage increasing difficulty. A number of options for intervention by the schools and interested organizations exist, however. These include active recruitment efforts at both high school and college levels, informal and formal procedures for the better distribution of available talent, and increasing present and new sources of financial aid to medical students.

**Blood Bank and Transfusion Services
Directory to Be Published**

Over 4,500 hospitals, Red Cross, and community blood banks are now being surveyed to determine and record their identities and relationship to transfusion services and blood banking. Specific data is being gathered to determine the number of units of human blood collected and transfused by each institution. This and other information will be published this year in a third edition of "Directory of Blood Transfusion Facilities and Services" by the Joint Blood Council.

The Directory will also include information on technical and operating procedures, approvals, supervision, reciprocity exchange systems, tissue storage banks, and other pertinent data. It carries also a coded functional definition for each listed facility.

All facilities collecting, processing, and using blood are requested to complete the directory data cards and return them immediately. No charge is made for the listing. The Directory

TABLE II
MEAN MCAT SCORES OF ACCEPTED AND REJECTED APPLICANTS DURING THE PAST 9 YEARS

| Accepted Applicants | | | | | | | Rejected Applicants | | | | | | |
|---------------------|-----|-----|-----|-----|-----------------|---------------|---------------------|-----|-----|-----|-----------------|---------|--|
| Year | VA | QA | MS | Sci | No. Taking MCAT | Total N | VA | QA | MS | Sci | No. Taking MCAT | Total N | |
| 1952-53 | 522 | 526 | 519 | 525 | 7,346 | 7,778 | 465 | 459 | 467 | 457 | 7,398 | 8,985 | |
| 1953-54 | 519 | 525 | 524 | 530 | 7,426 | 7,756 | 461 | 457 | 472 | 460 | 5,801 | 6,922 | |
| 1954-55 | 517 | 521 | 530 | 533 | 7,527 | 7,878 | 457 | 455 | 473 | 459 | 5,661* | 6,660 | |
| 1955-56 | 524 | 528 | 527 | 522 | 7,688 | 7,969 | 466 | 459 | 476 | 454 | 6,652* | 6,968 | |
| 1956-57 | 525 | 525 | 526 | 519 | 8,012 | 8,263 | 463 | 458 | 473 | 445 | 6,859 | 7,654 | |
| 1957-58 | 528 | 517 | 527 | 516 | 8,223 | 8,302 | 467 | 452 | 472 | 442 | 6,840 | 7,489 | |
| 1958-59 | 527 | 532 | 520 | 523 | 8,301 | 8,366 | 461 | 456 | 467 | 441 | 6,305 | 6,804 | |
| 1959-60 | 529 | 527 | 527 | 527 | 8,449 | 8,512 | 470 | 455 | 473 | 449 | 6,019 | 6,440 | |
| 1960-61 | 527 | 533 | 527 | 533 | 8,500 | 8,560 | 464 | 453 | 473 | 449 | 5,462 | 5,837 | |
| Total Applicants | | | | | | | | | | | | | |
| Year | VA | QA | MS | Sci | No. Taking MCAT | Grand Total N | | | | | | | |
| 1952-53 | 493 | 492 | 493 | 491 | 14,744 | 16,763 | | | | | | | |
| 1953-54 | 494 | 495 | 501 | 499 | 13,227 | 14,678 | | | | | | | |
| 1954-55 | 491 | 493 | 506 | 501 | 13,188* | 14,538 | | | | | | | |
| 1955-56 | 497 | 496 | 503 | 490 | 14,340* | 14,937 | | | | | | | |
| 1956-57 | 496 | 494 | 502 | 485 | 14,871 | 15,917 | | | | | | | |
| 1957-58 | 500 | 487 | 502 | 482 | 15,063 | 15,791 | | | | | | | |
| 1958-59 | 499 | 499 | 497 | 488 | 14,606 | 15,170 | | | | | | | |
| 1959-60 | 504 | 497 | 505 | 494 | 14,468 | 14,952 | | | | | | | |
| 1960-61 | 503 | 501 | 506 | 500 | 13,962 | 14,397 | | | | | | | |

*Estimated

service has the support of the Council's Member Institutions and the federal medical services.

* * *

Veterans Administration Teaching Program

The Veterans Administration has become the nation's largest training ground for colleges and universities in preparing students at the professional level for the medical field.

More than 16,000 such students now spend part of their time at VA hospitals and clinics each year.

In return, affiliation with the schools brings faculty members and latest medical knowledge to VA stations and thus raises the quality of medical care for VA patients. Participation in the medical education programs also helps the VA secure scarce highly trained personnel to fill its staff vacancies.

VA hospitals and clinics are affiliated with 75 of the nation's 85 medical schools, 32 of the 47 dental schools, all of the 56 accredited schools of social work, the 58 approved universities for graduate training in clinical and counseling psychology, about a tenth of the nation's nursing schools, and with 127 schools in providing clinical training in the physical medicine and rehabilitation therapies.

Beginning last fall, a new university-VA program, second of its kind in the nation, is training college graduates in rehabilitation of the blind.

At latest count, the yearly total of college and university trainees at VA hospitals and clinics included:

More than 3,000 physicians serving medical residencies to become specialists in anesthesiology, cardiology, dermatology, gastroenterology, general surgery, internal medicine, neurology, neurosurgery, ophthalmology, orthopedic surgery, otolaryngology, pathology, physical medicine, plastic surgery, proctology, psychiatry, pulmonary diseases, radiology, thoracic surgery, and urology.

More than 7,700 medical students serving clinical clerkships.

Thirty-nine dental residents in oral surgery, periodontia, and prosthodontia and 38 dental interns. These are relatively recent but increasingly important forms of advanced dental training. The 28 VA dental residency programs and 34 VA dental internship programs represent 21

percent of the dental residency programs in the United States and 17 percent of the dental internship programs.

More than 3,000 student nurses and 210 non-VA registered nurses in advanced educational programs at 20 colleges and universities.

About 15 percent of the nation's graduate students in clinical and counseling psychology, 11 percent of the dietetic interns, 25 percent of the medical or psychiatric social work students, 75 percent of all junior and senior year occupational therapy students of the nation, and 60 percent of the junior and senior year physical therapy students.

* * *

Health and Safety Tips From The American Medical Association

Americans are always getting hurt. The nation's 185,000,000 people have about 30,000,000 accidents every year that are sufficiently severe to require medical attention. No one knows how many others—tens of millions at least—who suffer minor cuts, burns and bruises that require first aid.

With a few exceptions, almost every one of those 30,000,000 accidents requiring medical attention could have been avoided by a little care and foresight.

The American Medical Association, in Today's Health Magazine, offers ten basic points for parents as safety guides for families. In drilling the youngsters on safety rules, the parents also remind themselves to be more careful.

- Know and follow safety practices yourself.
- Equip and maintain your home and yard safely.
- Install and use safety belts in your car. Keep the car in safe condition at all times.
- For your children's sake, and your own, work, play and travel safely.
- Keep young children under competent supervision at all times.
- Select and instruct baby sitters with care.
- Gradually increase the child's responsibility for his own safety and that of others.
- Hold family safety meetings, including home fire drills.
- Give active support to schools in their safety programs.
- Remember that boys have many more acci-

dents than girls. Let your son be a regular, active boy, but keep him alive.

* * *

Field trials for two types of measles vaccine got underway recently in some 5,000 children beginning in five widely separate parts of the country, Surgeon General Luther L. Terry of the Public Health Service announced.

The studies are being conducted by local health departments, in cooperation with the Service's Communicable Disease Center, in DeKalb County, Georgia; Cincinnati, Ohio; Seattle, Washington; and in Rochester and Buffalo, New York.

"This is the first large scale trial of killed virus measles vaccine and the first time it has been used in combination with live virus vaccine in a field trial," Dr. Terry said. "The purpose is to find out how effective these methods will be in protecting children against measles."

Previous trials of measles vaccine, he explained, have tested the use of live vaccine alone or in combination with gamma globulin. The live vaccine alone has frequently produced fever and rash. These side effects are reduced when gamma globulin is used, but supplies of gamma globulin may not be adequate for mass vaccination programs since it is derived from human blood.

Dr. Terry pointed out that in the United States measles causes more deaths than any other common childhood disease. Conservative estimates indicate that approximately 500 children die each year as a result of infection with the measles virus. Many of these deaths are due to measles encephalitis which may occur as often as 1 in 400 cases.

The children in the current study will be divided into three groups. The first group will receive three shots of killed virus vaccine. The second will be given two shots of killed vaccine and one shot of live. The third will receive dummy injections (placebos).

* * *

Dr. Fulton Named Chief of Staff of New Hospital

Dr. William L. Fulton, a North Little Rock internist and pediatrician, has been selected as the first chief of staff of the North Little Rock new Memorial Hospital. The 50 physicians who comprise the active medical staff elected Dr. Fulton.

Other officers are Dr. G. Max Thorn, a pediatrician, vice chief of staff, and Dr. Amail Chudy, a general practitioner, secretary.

Dr. Fulton has practiced at North Little Rock since 1946. He opened a clinic at 513 Main Street with Dr. Shelby Atkinson in 1947 and entered a partnership with Dr. George Napper when Dr. Atkinson retired.

* * *

Residency Program Given Okay

The American Medical Association has renewed approval of the residency program in anesthesiology at St. Vincent's Infirmary. A. Allen Weintraub, assistant administrator of the Infirmary made the announcement. The approval is for another two years and was granted by the Association's review committee which represents the American Board of Anesthesiology and the Committee on Medical Education and Hospitals. Dr. Allen A. Gentling is director of the department at St. Vincent's Infirmary.

* * *

The American Medical Association Education and Research Foundation

The American Medical *Education* Foundation was established in 1951 for the purpose of providing financial assistance to medical schools. The American Medical *Research* Foundation was established in 1957 for broader purposes, including the provision of financial assistance to medical schools.

Effective January 1, 1962, the programs of AMEF and AMRF were consolidated within the framework of a single Foundation—the American Medical Association Education and Research Foundation. At the same time, these programs were expanded and a concerted effort made to provide increased financial assistance to medical schools, in addition to financing the other projects of the foundation.

This Foundation is incorporated under the laws of the State of Illinois as an educational, scientific organization. All contributions to the AMA-Education and Research Foundation are tax deductible under Section 501(c)(3) of the U.S. Internal Revenue Service Code.

The affairs of this Foundation are managed by a Board of Directors elected annually by and from the membership of the Board of Trustees of the American Medical Association.

Tuberculosis Book Available

Dr. Ben Saltzman, president of the Arkansas Tuberculosis Association, says, "instructions for washing glassware in a tuberculosis laboratory is but one of the bits of useful information in the 11th edition of Diagnostic Standards and Classification of Tuberculosis, just off the press."

This practical handbook, used throughout the world, is published by the National Tuberculosis Association. It is distributed as a public service to doctors and the Health Department by the Arkansas Tuberculosis Association—the Christmas Seal organization.

The 1961 edition, the first since 1955, has color illustrations and includes the coding system for tuberculosis used in hospitals and on most health department records as well as sections on the clinical course of tuberculosis, diagnostic methods, bacteriology, and other useful information. The chapter on bacteriology includes descriptions of human, bovine and avian tubercle bacilli and also of "unclassified" bacteria which cause lung disease resembling tuberculosis.

The 1961 edition was prepared by a committee of the American Thoracic Society, medical section of National Tuberculosis Association, headed by William H. Oatway, Jr., M.D., of Altadena, California.

* * *

A Texas plan to detect phenylketonuria, a metabolic disease in newborn infants which can cause mental retardation, has been proposed by a Houston pediatrician.

Dr. John K. Glen, writing in the December issue of the *Texas State Journal of Medicine*, suggested a voluntary plan, with do-it-yourself kits to be provided mothers of newborn babies to take home from the hospital.

Under the plan, Dr. Glen writes, the doctor requests the mother to perform urine tests on her infant at three and six weeks of age. The mother is given a packet of test materials by the hospital at the doctor's request.

The plan provides the broadest possible early screening for the disease, Dr. Glen stated. Although PKU is rare, occurring only once in 20,000 births, early detection is necessary for early treatment. Testing has indicated that 200 to 400 babies with PKU are born each year and that the disease is responsible for at least one per cent of

the 200,000 mentally retarded now in institutions. Treatment by special diet should be instituted as early as possible to prevent failure of normal brain development—preferably before the infant is one month old. Untreated, such children usually are severely retarded by the time they are seven years old.

The Texas plan is part of the educational program launched by the Texas Medical Association for physicians to encourage detection of the disease in newborn infants.

THINGS



TO

COME

The annual meeting of the American Society of Psychosomatic dentistry and medicine will be held at the Shoreham Hotel, Washington, D.C., beginning Friday evening, March 2, to the afternoon of Sunday, March 4, 1962, immediately preceding the district of Columbia Dental Society meeting. The main theme of the program will be *Patient Relationship*, its importance and development in the clinical setting of general practice. On Saturday and Sunday morning round table discussions will be held in the utilization of hypnosis in the various specialties of general practice. All dentists, physicians and psychologists are cordially invited to attend. Since this program will not be devoted entirely to hypnosis, members of the general practice society will receive category II credit for attendance. For the detailed program, contact Dr. Jesse Caden, chairman, Program Committee, 5213 Connecticut Avenue, N.W., Washington 15, D.C., or Dr. Philip Ament, 964 Delaware Avenue, Buffalo 9, New York.

* * *

ANNOUNCEMENT

The SCOTT AND WHITE CLINIC announces its TENTH ANNUAL CONFERENCE IN MEDICINE AND SURGERY to be held in Temple, Texas on March 4, 5, 6, 1962.

Topics of practical interest to the practicing physician will be stressed. Guest speakers will be Dr. William H. Beierwaltes of the University of Michigan Medical School, Ann Arbor, Michigan, and Lt. Col. George F. Rumer, Director of Medicine and Surgery, Army Medical Service School, Brooke Medical Center, San Antonio, Texas.

P R O G R A M

Sunday, March 4, 1962, P.M. — Practical Endocrinology.

Monday, March 5, 1962, A.M.—Cardiopulmonary Clinics.

Luncheon: "The Physician's Role in the Management of Mass Casualties," Lt. Col. Rumer. P.M.—Gastrointestinal Clinics.

Dinner: "Home Preparedness for Disaster" — Lt. Col. Rumer.

Tuesday, March 6, 1962, A.M.—Practical Session: Demonstrations incorporating electrocardiograms, intravenous pyelograms, and roentgenograms; special demonstrations in orthopedics and in inhalation therapy.

CREDIT through the University of Texas Postgraduate School of Medicine to the Academy of General Practice 18 Hours.

Registration Fee—\$25.00

Wives are cordially invited. Special entertainment has been planned.

For further information and detailed program, please write: John D. Bonnet, M.D., Chairman, Conference in Medicine and Surgery, Scott and White Clinic, Temple, Texas.

* * *

Sixteenth Annual Symposium on Fundamental Cancer Research Conceptual Advances in Immunology and Oncology

The Sixteenth Annual Symposium on Fundamental Cancer Research will be held March 1, 2, and 3 at the M. D. Anderson Hospital and Tumor Institute, Houston, Texas. Topics for sessions are as follows: Theories of Antibody Production; Control Mechanisms of Antibody Synthesis; The Nature of the Antigen-Antibody Reaction; Transplantation and Immunological Tolerance; and Cancer Specific Antigens.

All interested physicians are invited to attend.

"The University of Texas Postgraduate School of Medicine and The University of Texas M. D.

Anderson Hospital and Tumor Institute will co-sponsor a Clinical Symposium on 'The Management of Children With Cancer' in Houston, Texas, on March 30 and 31, 1962. The program will include lectures by guest speakers and by members of the M.D. Anderson Hospital staff, as well as case presentations and panel discussions. Important aspects of chemotherapy, surgery and radiotherapy in the management of children with various types of neoplastic disease will be covered. Emphasis will be placed on the problems arising during treatment.

For further information write: Office of the Dean, The University of Texas Postgraduate School of Medicine, 102 Jesse Jones Library Building, Texas Medical Center, Houston 25, Texas."

A world forum on syphilis and other treponematoses will be held September 4-8, 1962, in Washington, D.C.

Sponsors of the forum are the American Venereal Disease Association, the American Social Health Association, and the United States Public Health Service. The World Health Organization and the International Union Against the Venereal Diseases and the Treponematoses will participate.

On behalf of the sponsors, Dr. Luther L. Terry, Surgeon General of the U.S. Public Health Service, has invited health workers from throughout the world to attend the forum. Dr. Terry said the forum will aim to establish a fund of current knowledge about the control of syphilis, to outline future courses of action, and to stimulate additional research and investigations in particular areas.

Need for the forum was recognized and pointed out recently by the World Health Organization Expert Committee on Venereal Diseases and the Treponematoses.

Since the control of syphilis is interrelated with social as well as medical sciences, the forum will utilize experts in both fields to re-examine present concepts of syphilis control and suggest new areas and directions for development.

The forum will immediately precede the International Congress of Dermatology (September 9-16) also to be held in Washington, thus enabling

many specialists to attend both meetings.

Included in the invitation to the forum are all persons or organizations engaged in or interested in the control and eradication of the venereal diseases.

Special invitations to present papers are to be issued by the Program Committee to outstanding scientists throughout the world. Chairman of the Committee is Dr. William J. Brown, Venereal Disease Branch, Communicable Disease Center, U. S. Public Health Service, Atlanta 22, Georgia, U.S.A. Organizations expecting to be represented and individuals planning to attend should write to Dr. Brown. Headquarters for the forum will be the Sheraton Park Hotel, Washington, D.C.



OBITUARY

Dr. Fount Richardson, who since 1937 had been director of student health service at the University of Arkansas, died in a Dallas, Texas hospital. He went to Dallas to attend a meeting of the Southern Medical Association, but suffered a heart attack and was hospitalized. He was widely known in medicine, having served as national president of the American Academy of General Practice in 1959. He was president-elect of the Southern Medical Association, a former president of the Arkansas Medical Society, and had served as editor of the Arkansas Medical Society Journal. He was a member of a number of medical groups including the American Medical Association. He served as councilor for the Southern Medical Association in 1954.

ABSTRACTS

Evaluation of Early Esophagoscopy and Corticosteroid Therapy in the Management of Corrosive Injury of the Esophagus—G. J. Viscomi, J. Beekhuis, and C. F. Whitten

J Pediat—Vol. 59:356 (Sept.) 1961

Esophagoscopy was performed under general anesthesia in 76 children (aged from 1 to 14 years) within 24 hours after ingestion of a corrosive agent to establish the presence or absence of esophageal burns. Of the 64 children with oropharyngeal burns, esophagoscopy revealed definite esophageal burns in 16; these patients were immediately given prednisolone treatment. The formation of early stricture was observed in only 1 of the 16 patients. The study showed that corrosive burns of the mouth and pharynx do not necessarily indicate presence of esophageal burns, and esophageal burns may be present without oropharyngeal injury. Early esophagoscopy provides a positive diagnosis and a sound basis for the institution of corticosteroid therapy in corrosive burns of the esophagus, and eliminates lengthy hospitalization and treatment.

ANSWER—What Is Your Diagnosis?

A06-24-35

63 Year Old White Female

Three year history of personality change and confusion with inability to walk for about one month. On examination the left pupil was larger than the right. There was generalized hyper-reflexia and a questionable Babinski sign on the left.

DIAGNOSIS: Astrocytoma—Grade III.

X-RAY FEATURES: There is a large area of irregular patchy calcification in the right temporo-parietal area indicating calcification within the large tumor mass.



PERSONAL AND NEWS ITEMS

Hospital Official Speaks to Doctors

Dr. Pervis Milnor, chief of staff of the Baptist Hospital in Memphis, gave a lecture at the Batesville Country Club to climax Batesville Medical Science Days. Dr. Milnor spoke on "Cholesterol and Its Treatment and the Current Concepts of Anticoagulation." The Science Days event was sponsored by the Arkansas Academy of General Practice. Dr. Jim Lytle served as chairman of local arrangements.

Dr. Gill Heads Medical Staff

Dr. John E. Gill was elected president of the Medical Staff of St. Michael's Hospital in Texarkana. He succeeds Dr. Eugene T. Ellison. Dr. J. K. Laws was elected vice president and Dr. Charles V. Bintliff, secretary. Officers of the Medical Staff automatically become members of the executive committee. Other members of the executive committee are Dr. Ellison, Dr. Mitchell Young, Dr. J. E. Rochelle, III, and Dr. J. W. Burnett.

St. Vincent's Staff Officers

Dr. Samuel Thompson was named chief of the professional staff at St. Vincent's Infirmary for 1962-63, in Little Rock. Other officers include Dr. John Busby, secretary and Dr. James Headstream, vice chief of staff.

3 Physicians Named Officers

Three Osceola physicians were elected to positions in the Mississippi County Medical Society at the final meeting last year, at the Chickasaw Hospital in Blytheville. Dr. George Pollock was elected vice-president for 1962; Dr. Eldon Fairley was re-elected secretary-treasurer; while Dr. L. D. Massey was named a member of the Board of Censors. Dr. Hunter Sims, Jr., of Blytheville was elected president for 1962 and Dr. C. R. Cole was named delegate to the State Society.

Dr. W. Duane Jones Heads Sanatorium

Dr. W. Duane Jones is the new medical director of the state Tuberculosis Sanatorium. He is a native of Indiana and came here from Ashland, Kentucky, where he had been chief executive at the state Tuberculosis Hospital, District No. 4. He helped set up that hospital and a similar one at Madisonville, Ky.

Doctor James W. Headstream was a guest speaker at a Seminar in Pediatric Urology held at the University of Missouri Medical Center.

* * *

ABSTRACTS

Diseases of the Colon and Rectum, Philadelphia Asymptomatic Pathology of Colon as Disclosed by Air Contrast Enema—E. D. Weston

Dis Colon Rectum—Vol. 4:356 (Sept.-Oct.) 1961

Many silent or asymptomatic conditions of the colon can be detected only by roentgenologic study of the colon after the administration of a barium enema. An analysis of the records of 808 patients who underwent this type of examination, including air contrast studies, disclosed many unsuspected abnormal conditions of the colon. Complaints of these patients related only to anorectal disorders such as hemorrhoids, fissures, pruritus ani, and fistula-in-ano. Excluding patients in whom the colon was redundant, there were 395 with abnormalities which included: spastic colon, 131; diverticulosis, 118; diverticulitis, 11; "ptosis," 35; ulcerative colitis, 29; megacolon, 4; carcinoma, 3; polyposis, 2; amebiasis, 2; malposition, 2; and ileitis, 1. Thus there were 356 cases (44%) with positive findings. The authors conclude that proper investigation of all proctologic disorders should include not only sigmoidoscopy, but air contrast barium enema studies of all patients over 30 years of age.



PROCEEDINGS OF SOCIETIES

Contributors to the American Medical Education Foundation During Month of November, 1961.

| | |
|---|----------|
| Dr. Lucille K. Champion, Stuttgart | \$ 5.00 |
| Dr. J. W. Dorman, Springdale | 25.00 |
| Dr. Milton Deneke, West Memphis | 25.00 |
| Dr. Eldon Fairley, Osceola | 100.00 |
| Dr. Julian Fairley, Osceola | 100.00 |
| Dr. Elisha M. Gray, Mountain Home | 50.00 |
| Dr. Ellery C. Gay, Little Rock | 25.00 |
| Dr. John F. Guenthner, Mountain Home | 25.00 |
| Dr. Alfred H. Hathcock, Batesville | 10.00 |
| Dr. Robert A. Hayes, Wynne | 10.00 |
| Dr. Clark B. Proctor, Little Rock | 5.00 |
| Dr. Porter R. Rodgers, Searcy | 25.00 |
| Dr. Vestal B. Smith, Marked Tree | 5.00 |
| Dr. Ben N. Saltzman, Mountain Home | 25.00 |
| Union County Medical Society, El Dorado | 15.00 |
| Craighead-Poinsett Woman's Auxiliary | 5.00 |
| Pope-Yell Woman's Auxiliary | 5.00 |
| | ----- |
| | \$460.00 |

* * *

Medical Careers Night Held in Little Rock

Medical Careers Night was sponsored by the Pulaski County Medical Society and the society's auxiliary. The event was held in the University Medical Center Auditorium for Pulaski County students, and their parents, who were interested in medical careers.

Some facet of the 150 health careers possible were touched on during the meeting, either on the program or by means of about 30 exhibits.

Hot Springs Surgeon Elected Head of Cancer Society's Arkansas Unit

Dr. William Martin Eisele, a Hot Springs general surgeon, was elected president of the Arkansas Division of the American Cancer Society at the annual meeting at the Coachman's Inn.

Eisele, a graduate of the University of Arkansas Medical School and a state Executive Committee member for 7 years, succeeds A. E. Townsend, Jr. of Little Rock. Other new officers are Louis Haven, Jr. of Forrest City, vice president; Mrs. W. R. Brooksher of Fort Smith, secretary; and W. Burney Fitch of Fort Smith, Treasurer.

* * *

County Medical Society Officers

Dr. Robert Watson was elected president-elect of the Pulaski County Medical Society at St. Vincent Infirmary. Dr. Watson will serve as president in 1963. Dr. John McCollough Smith will be the Society's president in 1962. Other Society officers include Dr. Payton Kolb, treasurer; Dr. H. Elvin Shuffield, vice president, and Dr. W. M. Hamilton, recording secretary, and Dr. Joe Scruggs, treasurer-elect.

District Medical Society Meeting Held at Monticello

The Fourth Councilor District of the Arkansas Medical Society held its fall meeting at the Ridgeway Hotel in Monticello. Dr. A. G. Sullenberger of Pine Bluff, is president of the District and Dr. Lewis Hyatt of Monticello was in charge of arrangements for this meeting. Speakers for the study session were Dr. Joseph Buchman and Dr. Fred Berry, Little Rock surgeons. Topics for dis-

cussion were related to heart and blood vessel surgery in which the two speakers are especially interested and active.

Special guests included Dr. and Mrs. Bill Snodgrass, president of the State Medical Society, Dr. and Mrs. W. K. Shorey, new Dean of the Arkansas School of Medicine, and Mr. and Mrs. Storm Whaley, vice president of the University of Arkansas in charge of the University Medical School.



Doctors Wives Entertained by Mrs. McFarland

The Woman's Auxiliary to the Garland County Medical Society met with Mrs. L. R. McFarland as hostess. Co-hostesses for this meeting were Mrs. James French, Mrs. Richard Graham, Mrs. Stuart McConkie and Mrs. Vernon Sammons.

Decorations of tulle trees and gold magnolia leaves were the theme and refreshments of red punch and cookies were served. A delightful program of carols was presented by the St. Luke's kindergarten under the direction of Mrs. Cecil Lamb and accompanied by Mrs. Katrina Williams.

Mrs. Carl Parkerson, president, presided over the meeting at which 35 members were in attendance.

ANSWER — ELECTROCARDIOGRAM OF THE MONTH

RATE: 100 RHYTHM: Sinus

PR: .19 sec. QRS: .08 sec. QT: 32 sec.

INTERPRETATION: Within normal limits.

COMMENT: This tracing is an example of changes produced by an electrical position of the heart, which is vertical. The patient had a barrel chest deformity of the thoracic cage with a rather small, perfectly normal heart. The dyspnea complained of was felt to be due to pulmonary disease.



BOOK REVIEWS

PROBLEMS IN SURGERY, by Frank Glenn, M.D., Lewis Atterbury Stimson, Professor of Surgery, Cornell University Medical College, New York, N.Y.; Surgeon-in-Chief, The New York Hospital-Cornell Medical Center, New York, N.Y.; edited by George E. Wantz, Jr., M.D., Assistant Professor of Clinical Surgery, Cornell University Medical College, New York, N.Y.; Assistant Attending Surgeon, The New York Hospital-Cornell Medical Center, New York, N.Y., illustrated, pp. 512, published by The C. V. Mosby Company, St. Louis, Mo., 1961.

This book is exceedingly interesting. It consists of a series of problem cases presented at the Surgical Grand Rounds in the New York Hospital-Cornell Medical Center. The book is exceptionally well illustrated and it has adequate references. The reviewer found some of the cases reported to be very short and he would prefer fewer cases written up in a little more detail. Nevertheless, the cases are well presented and of many different types. The reader will find this book interesting regardless of whether he is a medical student, intern, resident or practicing physician. This book is heartily recommended as an interesting discussion of medical problems. It is not an encyclopedic type discussion of surgery. AK

OBSTETRICS by J. P. Greenhill, M.D., F.A.C.S., F.I.C.S. (Hon.), Senior Attending Obstetrician and Gynecologist, The Michael Reese Hospital; Obstetrician and Gynecologist, Associate Staff, The Chicago Lying-in Hospital; Attending Gynecologist, Cook County Hospital; Professor of Gynecology, Cook County Graduate School of Medicine, Twelfth Edition, illustrated, pp. 1098, published by W. B. Saunders Company, Philadelphia and London, 1966.

Greenhill's textbook of obstetrics is outstanding in its field. It was originally a text compiled by Joseph B. De Lee, M.D. and was highly thought of in its original form. This text represents a very complete discussion of obstetrics including the physiology of pregnancy, the physiology and conduct of labor, the physiology and conduct of the puerperium, pathological disturbances during pregnancy, and operative obstetrics. The text is well illustrated. It is easy to read. It has abundant bibliography. This book is not all written by the author; many chapters are written by outstanding authorities in other fields. This text is heartily recommended to all medical students and practitioners. AK

HANDBOOK OF SURGERY edited by John I. Wilson, M.D., Chief of Surgery, Veterans Administration Hospital, San Francisco, California, Associate Clinical Professor of Surgery, University of California School of Medicine, San Francisco, California, and Joseph J. McDonald, M.D., Dean of the Faculty of Medical Sciences, American University of Beirut, Beirut, Lebanon, Formerly Professor of Surgery, Columbia University, New York, illustrated, pp. 644, published by Lange Medical Publications, Los Altos, California, 1960.

This small text contains in concise outline form many facets in the practice of surgery. It has a limited usefulness.



Sponsored by Arkansas Tuberculosis Association

The Emerging Pattern of Urban Histoplasmosis

*An epidemic of the fungous disease occurred in Mexico, Missouri, among a group of boys who had helped clear a large city park. Soil samples from the park, a favorite roosting place for starlings, yielded positive cultures for *Histoplasma capsulatum*.*

Urban children, because of their more localized environment and less frequent exposure, appear to be more suitable subjects than rural children for studies of the acquisition of infection with *Histoplasma capsulatum*. Three sources of infection among urban children have been reported: visits to farms or prior rural residence, exposure in urban structures contaminated with bird droppings, and importation of contaminated farm soil or manure as fertilizer.

In the present paper we wish to call attention to a fourth source of infection among urban children, namely, infection in wooded, open park areas contaminated by bird droppings. This mode of infection is illustrated by the report of an epidemic.

THE EPIDEMIC

Mexico is a city of 15,000 people in east central Missouri. During the second week in April, 1959, similar illnesses characterized by chills, high fever, and cough developed in four boys in Mexico. All four had X-ray films of the chest taken at the local hospital, and two were admitted there. The clinical features and X-ray findings in these four cases led the hospital radiologist to suspect histoplasmosis. Positive skin and serologic tests later confirmed the diagnosis.

An interview with these boys revealed that they

were all Boy Scouts and members of the same troop. Furthermore, their only close association was related to scouting activities. All four had onsets of illness within twelve to fourteen days after March 28, 1959. On that day a group of 64 Scouts from the four Mexico troops had worked together clearing a large city park.

Since it was probable that a large proportion of the Scouts in Mexico had been exposed to the infection, arrangements were made through the organization for further investigations. An epidemiologic questionnaire was completed by 113 boys, but not all were willing to have skin and serologic tests and X-ray examination.

TESTS PERFORMED

The standard used in skin testing was of a potency equivalent to standard histoplasmin. Two complement-fixation tests were performed, histoplasmin being used as antigen in one and whole-yeast phase organisms in the other. X-ray films, 14 by 17 inches, were evaluated by physicians experienced in the interpretation of chest films.

Soil samples were collected on several occasions from the park suspected as the source and cultured for *H. capsulatum*.

The site of the epidemic was a part of 11 acres on which a large, plantation-type home, built before the Civil War, is located. The house had fallen into disrepair and the grounds converted into pasture for livestock. The grounds had been completely untended for 15 or 20 years and had become heavily overgrown with brush and trees. The city of Mexico had grown around the property so that the park now lies near the center of the city.

In December, 1958, when the city began clear-

M. L. FURCOLOW, M.D.; F. E. TOSH, M.D.; H. W. LARSH, PH.D.; H. J. LYNCH, JR., M.D.; and G. SHAW, M.D., *The New England Journal of Medicine*, June 15, 1961.

ing the property, it was described as a jungle, with dense underbrush and vines among large trees. Leaves and debris were at least several inches deep. Since about 1950 the park had been a favorite roosting place for starlings. By the summer of 1955 thousands of these birds inhabited the park and their droppings almost completely covered the ground. Because of the noise of the birds and the disagreeable odor, the local residents had undertaken eradication measures. Despite a marked decrease in the bird population, at the time of the epidemic there was still evidence of considerable bird droppings.

HISTOPLASMIN RESULTS

Of 64 boys who worked in the park, 62, or 97 per cent, had positive histoplasmin tests, 36 of 60, or 60 per cent, had positive complement-fixation tests for histoplasmosis, and 28 of 60, or 47 per cent, had active lesions on X-ray. Of a group of boys who had not worked in the park only 41 per cent had positive skin tests, 25 per cent had positive complement-fixation tests, and 25 per cent had active lesions on X-ray films. It appears that practically all the exposed susceptible boys became infected. It is not surprising to find a number with evidence of *H. capsulatum* infection even though they did not work on the property because Mexico lies within a highly endemic area. Furthermore, the central location of

the park favored casual visits and exposures.

Only 10 of the boys who worked in the park gave a history of clinical illness. Nine of these had positive histoplasmin skin tests and serologic and X-ray findings. In the other boy, only the skin test was performed and it was positive. In five of the 10 boys a moderately severe illness developed, lasting from one to six weeks, with symptoms of chills, fever, cough, malaise, and chest discomfort. The other five reported symptoms of a mild upper-respiratory tract infection lasting a few days.

Sixty-two per cent of all soil samples collected from this property were positive for *H. capsulatum* by culture, an usually high yield. There is little doubt that the fungus was flourishing abundantly throughout a large portion of the park site.

The question arose of whether the frequency of isolations from the park represented an unusual prevalence of the fungus or merely reflected a high prevalence throughout the entire area. Thus, soil samples were collected from six selected sites within a radius of three miles from the city of Mexico and in the city itself. Only one of the soil specimens was positive for *H. capsulatum*. It is clear, therefore, that the frequency of isolations from the park was unique and not in any way typical of similar sites in the same areas.

THE
JOURNAL
OF THE
Arkansas MEDICAL
SOCIETY

March, 1962

Vol. 58 No. 10

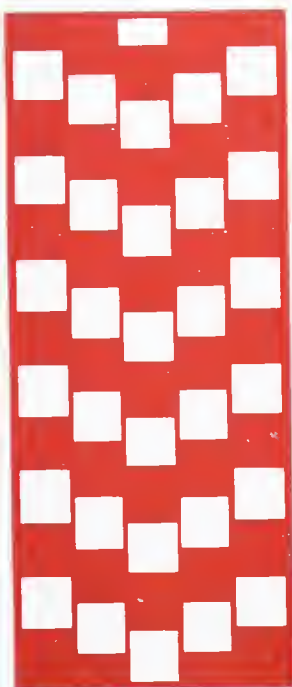
FORT SMITH, ARKANSAS

86th ANNUAL
ARKANSAS MEDICAL
HOT SPRINGS

U.C. MEDICAL CENTER LIBRARY

MAY 16 1962

San Francisco, 22



can parallel lines diverge?

Though the vertical lines *appear* to bow out at the bottom, the fact remains . . . they are parallel. Similarly, when facts regarding oral penicillins are rearranged, they may distort the true picture. Low price and high "blood levels" are important considerations, but it's what a drug *does* that counts.

V-Cillin K[®] achieves two to five times the serum levels of antibacterial activity (ABA) produced by oral penicillin G.¹ Moreover, it is highly stable in gastric acid and, therefore, more completely absorbed *even in the presence of food*. Your patient gets more dependable therapy for his money . . . and it's therapy he really needs.

For consistently dependable clinical results

prescribe V-Cillin K in scored tablets of 125 and 250 mg. or V-Cillin K, Pediatric, in 40 and 80-cc.-size packages. Each 5-cc. teaspoonful contains 125 mg. crystalline potassium penicillin V.

V-Cillin K[®] (penicillin V potassium, Lilly)

1. Griffith, R. S.: Antibiotic Med. & Clin. Therapy, 7:129, 1960.

This is a reminder advertisement. For adequate information for use, please consult manufacturer's literature. Eli Lilly and Company, Indianapolis 6, Indiana.



233221



**when the perfect combination
is threatened by a cough...**



Benylin[®] Expectorant

**provides the right combination
for effective cough control**

Your patient probably has a more "down-to-earth" occupation than the trapeze artist, but persistent coughing can cause a comparable drop in performance. Not so when you prescribe BENYLIN EXPECTORANT. This outstanding antitussive preparation effectively suppresses coughs due to colds or allergy through its combination of judiciously selected ingredients. Benadryl,[®] a potent antihistaminic-antispasmodic, calms the cough reflex, relieves bronchial spasm, and reduces nasal

stuffiness, sneezing, lacrimation, other symptoms associated with colds, and coughs of allergic origin. Efficient expectorants break down tenacious mucous secretions, thereby relieving respiratory congestion. And the pleasant-tasting, raspberry-flavored syrup provides a soothing demulcent action that eases irritated throat membranes.

BENYLIN EXPECTORANT contains in each fluidounce:

| | |
|--|---------|
| Benadryl [®] hydrochloride (diphenhydramine hydrochloride, Parke-Davis) | 80 mg. |
| Ammonium chloride | 12 gr. |
| Sodium citrate | 5 gr. |
| Chloroform | 2 gr. |
| Menthol | 0.1 gr. |
| Alcohol | 5% |

Supplied: BENYLIN EXPECTORANT is available in 16-ounce and 1-gallon bottles.

This advertisement is not intended to provide complete information for use. Please refer to the package enclosure, medical brochure, or write for detailed information on indications, dosage, and precautions.

PARKE-DAVIS

84762

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

THE JOURNAL OF THE *Arkansas* MEDICAL SOCIETY

Owned by
THE ARKANSAS MEDICAL SOCIETY
And Published Under Direction of the Council

ALFRED KAHN, JR., M.D., Editor
1300 West Sixth Street Little Rock, Arkansas
MR. PAUL C. SCHAEFER, Business Manager
218 Kelley Bldg. Fort Smith, Arkansas
LITTLE ROCK BUSINESS OFFICE
114 E. Second St. Little Rock, Arkansas

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY
WM. A. SNODGRASS, JR.—President Little Rock
H. KING WADE, JR., President-Elect Hot Springs
M. E. BLANTON, First Vice-President Jonesboro
CHARLES W. REID, Second Vice-President Pine Bluff
L. E. DREWREY, Third Vice-President Camden
H. ELVIN SHUFFIELD, Secretary Little Rock
W. R. BROOKSHER, Secretary Emeritus Fort Smith
BEN N. SALTZMAN, Treasurer Mountain Home
C. LEWIS HYATT, Speaker, House of Delegates, Monticello
J. P. PRICE, JR., Vice Speaker,
House of Delegates Monticello
MR. PAUL C. SCHAEFER, Executive Secretary,
P. O. Box 1345 Fort Smith

COUNCILORS

| | | |
|------------------|-------------------|-------------|
| First District | JOE VERSER | Harrisburg |
| | ELDON FAIRLEY | Osceola |
| Second District | HUGH R. EDWARDS | Searcy |
| | PAUL GRAY | Batesville |
| Third District | K. E. BEATON | Wynne |
| | PAUL MILLAR | Stuttgart |
| Fourth District | H. W. THOMAS | Dermott |
| | T. E. TOWNSEND | Pine Bluff |
| Fifth District | J. L. DEDMAN | Camden |
| | GEORGE C. BURTON | El Dorado |
| Sixth District | JOHN P. WOOD | Mena |
| | KARLTON H. KEMP | Texarkana |
| Seventh District | MARTIN EISELE | Hot Springs |
| | J. W. KENNEDY | Arkadelphia |
| Eighth District | ROBERT D. JONES | Little Rock |
| | BILL DAVE STEWART | Little Rock |
| Ninth District | ROSS FOWLER | Harrison |
| | STANLEY APPEGATE | Springdale |
| Tenth District | L. A. WHITTAKER | Fort Smith |
| | C. C. LONG | Ozark |

The Advertising policy of this JOURNAL is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

EXCLUSIVE PUBLICATION—Articles are accepted for publication on the condition that they are contributed solely to this JOURNAL.

COPYRIGHT 1962—By the JOURNAL of the Arkansas Medical Society.

NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to the membership.

SCIENTIFIC ARTICLES

| | |
|--|-----|
| Pedicle Graft for Transmeatal and
Endaural Tympanoplasty..... | 403 |
| <i>Houston L. Bell, M.D.</i> | |
| Stapedectomy With Vein Graft
and Polyethylene Prosthesis..... | 409 |
| <i>H. A. Ted Bailey, Jr., M.D.</i> | |
| A Physiological Analysis of the
Sign of Babinski | 416 |
| <i>William M. Landau, M.D.</i> | |
| Function of the Fusimotor Nerve
System in Man..... | 418 |
| <i>William M. Landau, M.D.</i> | |

WHAT'S NEW

| | |
|-------------------------------|-----|
| Lesser Hand Problems..... | 420 |
| <i>Kenneth G. Jones, M.D.</i> | |

TEACHING SEMINAR

| | |
|-----------------------------------|-----|
| Oral Hypoglycemic Agents..... | 424 |
| <i>W. R. Brooksher, Jr., M.D.</i> | |

FEATURES

| | |
|---|-----|
| Electrocardiogram of the Month..... | 431 |
| What Is Your Diagnosis?..... | 432 |
| Public Health at a Glance..... | 433 |
| Editorial..... | 435 |
| Program—
Eighty-first Annual Session,
Arkansas Medical Society..... | 437 |
| Commercial Exhibitors..... | 444 |
| Annual Committee Reports..... | 446 |
| Medicine in the News..... | 465 |
| Things to Come..... | 468 |
| Obituary..... | 469 |
| Personal and News Items..... | 470 |
| Proceedings of Societies..... | 472 |
| Book Reviews..... | 472 |
| Letters to the Editor..... | 474 |
| Tuberculosis Abstracts..... | 475 |

Notice on Form 3579-P to be sent to Arkansas Medical Society, 218 Kelley Building, Fort Smith, Arkansas. Published monthly under direction of the Council, Arkansas Medical Society, Vol. 58, No. 10. Subscriptions \$3.00 a year. Single copies 50 cents. Entered as a second class matter, May 1, 1955, at the post office at Little Rock, Arkansas, under the Act of Congress of March, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 1, 1918. Second-class postage paid at Little Rock, Arkansas.

PEDICLE GRAFT FOR TRANSMEATAL AND ENDAURAL TYMPANOPLASTY

A New Technique

Houston L. Bell, M.D.

*Department of Otolaryngology
Gill Memorial Eye, Ear and Throat Hospital
Roanoke, Virginia*

FREE GRAFTING TECHNIQUES have been utilized in tympanoplastic surgery since Ombredanne first utilized a thin free graft to dry up a radical mastoid cavity and noticed an excellent gain in the patient's hearing. Following this, Zollner then followed the same procedure and found that the graft, if placed in apposition with a mobile stapes, served as an adequate substitute for a membrana tympani and transferred the sound directly to the head of the stapes (tympanostapediopexy). He further noticed that where wider areas were to be grafted, the thin full thickness graft served to hold up better. In 1953, Wullstein reported on 100 cases of tympanoplasty in which he attempted to attain a closed tympanum with a drum capable of vibration, containing air, ventilated from the Eustachian tube to the fenestra rotunda. He found that the best result was obtained with a thin full thickness graft approximately 1 millimeter in thickness.

For some years now, pedicle skin grafts of various types have been used from time to time to close defects in tympanic membranes, or to construct substitute tympanic membranes in cases of congenital meatal atresia. These pedicle flaps

were more often obtained from the skin above or behind the auricle, but occasionally, were obtained from the skin of the meatus. External flaps were awkward and difficult to swing into position, and also left rather pronounced scarring. Sourdille used a tympanomeatal flap which proved convenient and practical for fenestration surgery. This flap was attached to the drum at twelve o'clock. Moritz, prior to the published works of Wullstein and Zollner, maintained that pedicle grafts were necessary for tympanoplasty. In corresponding with Sooy of San Francisco, I have learned that he prefers a sliding pedicle graft from the skin of the posterior meatal wall to close a small, marginal tympanic membrane perforation. As is well known, Zollner and Wright prefer to use a thick Thiersch split thickness graft which actually is a thin full thickness graft for simple myringoplasty. This is the type of graft to which I had accustomed myself to using prior to the use of the pedicle graft. I think it can be generally said, that the majority of otologists at the present time are using Wullstein's full thickness graft taken from behind the ear.

Shea, Tabb, Ted Bailey and others have em-

ployed the use of veins for the repair of the drum. It is my personal feeling that a vein is excellent for smaller perforations of twenty-five to thirty per cent of the tympanic membrane or less. It is not satisfactory for larger perforations or for complete replacement of the tympanic membrane. As a rule, more Gelfoam is required than one would like to use in the middle ear cavity to hold the vein graft in place. Too much Gelfoam promotes the possibility of adhesive processes within the middle ear. William House and Harold Schuknecht advocate the use of the anterior portion of the external auditory canal for small drum defects. Schuknecht prefers free grafts from the postauricular area for large drum defects.

The Portmanns and Claverie in their recent textbook in otologic surgery, have reported statistics of percentage of takes of free grafts by some twenty to thirty outstanding otologists from all over the world. The range of satisfactory "takes" varies 30 per cent to 90 per cent. This, to me, indicates that where there is such a variation in results of a certain procedure, it would seem that either the procedure is too highly technical or that there is not satisfactory coordination in evaluation of the results.

For the past two years, we have employed a meatal pedicle graft technique which can be used regardless of the size of the defect or type of tympanoplasty which is performed and is quite different from any described in the literature. The author described this in detail in an article presented at the Southern Medical Meeting in Atlanta in November, 1959. To me, it is a most practical procedure since it supplies all of the prerequisites for grafting techniques namely:

1. Good blood supply.
2. Adequate thickness for bridging an air space.
3. Adequate thickness for normal vibratory capacity and transmission of sound.
4. Texture and quality of the skin similar to that of the tympanic membrane because of its proximity to same.
5. It allows for better visibility of the annular area and the tympanic membrane, and it may be used for all types of procedure.

Special Considerations in Tympanoplasty Procedures

1. *Adequate thickness of graft.* Probably first and foremost is the consideration of bridging an

open space such as the tympanic defect in tympanoplastic surgery. The greater the defect, the greater the incidence of slough of the graft, and one must be assured of a good blood supply. Guilford and Wright have pointed out the necessity of adequate thickness so that the subepithelial vascular network will assume the role of nutrient supply of blood and maintain viability of skin over an air space. Otherwise, sloughing will occur. Grafts 1 millimeter in thickness are considered adequate.

2. *Donor Site.* Various donor sites have been selected such as the postauricular area, inner surface of the arm and even foreskin of the penis have been suggested as donor areas either because of facility of obtaining the graft, or because of elasticity of the skin.

3. *Recipient Site.* It has been pointed out in previous articles that the recipient site must be adequately prepared for grafting. (a) All meatal skin must be meticulously and microscopically removed from the inner portion of the bony canal wall adjacent to the drum membrane. (b) The drum remnant must be thoroughly denuded of epidermis leaving only the fibrous layer of the drum to adequate exposure over the entire drum area. If necessary, the anterior bony canal wall should be removed for complete exposure of the anterior annular area. This is most important to insure adequate "take" of the skin anteriorly which is the most common site of "breakdown" of the graft and to prevent "iatrogenic" cholesteatoma formation. (c) The graft must be in complete apposition with the drum remnant or inner bony wall surface at all points to insure adequate take. This is particularly true anteriorly where the drum remnant slopes medially, otherwise, there will be a retraction of the graft laterally and a so-called false tympanic membrane will be formed which is not in contact with the ossicular structures. (d) Overlapping of the graft is to be avoided as this predisposes to blood spaces and promotes sloughing. (e) Meatal skin is elevated and is allowed to overlap the free graft to prevent invasion beneath the newly placed skin to form cholesteatoma.

In 1957, we reported on a series of tympanoplasty procedures in which free thick split thickness grafts were employed with fairly good results only when: (a) Special care was taken in preparing a large bed completely free of islands of epi-

thelium to receive the graft. (b) The graft was uniform in thickness and at least 1 millimeter thick. (c) The defect to be bridged was not too large, in which case the promontory of the cochlea was used as a contact. (d) The free graft was in good contact with the "bed." There was no overlapping of edges and the margins were in good apposition with the meatal epithelium. Free grafts were obtained, for the most part, from the postauricular area either with a straight razor or Bard-Parker blade. Later, grafts were prepared from an elliptical incision posterior to the auricle and thinned down to the 1 millimeter thickness which seemed most adequate for the purpose in mind. It was pointed out at that time, that split thickness grafts would take more readily than thick ones, but were more likely to slough, while thin full thickness grafts had less percentage of "takes" but held up much better. Furthermore, overall hearing results were not likely to be as good with the thicker grafts although thinning will occur in time with gradual improvement in hearing. Taking into account these precautions, statistical results as presented at that time still revealed only 40-50 per cent adequate "take" in the free graft technique. It was pointed out in this presentation that in the author's hands, pedicle grafts were preferred to free grafts where possible. During the past twenty-four months, the pedicle graft prepared from meatal skin has been employed routinely with much better results than we had obtained with free grafting from other donor sites.

Preparation for Tympanoplasty

1. Since the aims of tympanoplasty are twofold, namely, eradication of disease and improvement of hearing, it is imperative to eliminate infection prior to consideration of repair of the sound conduction mechanism. Culture and sensitivity studies are run and antibiotics instituted.

2. Attention is directed to the nasopharynx to eliminate mechanical obstruction of the Eustachian tube and nasosinus pathology. Management of allergic rhinosinusitis is attempted. In our hands, allergic reactions in the Eustachian tube have been the most difficult problem to handle.

3. Microscopic examination of the middle ear structures giving special attention to the character of the mucosal lining of the middle ear wall and the hypotympanum is imperative. If the mucosa is hyperplastic and redundant with polypoid

changes, chances of successfully drying the ear without a complete mastoidectomy are greatly reduced. If cholesteatomatous debris is noted, the patient is again a candidate for a tympanoatotomy and many times an M-I or modified I procedure can be performed in which the posterior bony canal wall may be preserved and grafting procedure employed at the same time.

In instances where there is a persistent or intermittent mucoid discharge which is most likely of Eustachian tubal origin, grafting is of little value unless attention is devoted to the tube in order to obtain satisfactory ventilation. The following observations are made:

1. Polyethylene tubing placed permanently in the Eustachian tube is of little value. Tubing placed temporarily at time of "cleanup" procedure for re-establishing ventilating capacity of the Eustachian tube and withdrawn after six to eight weeks seems advantageous in many respects.

2. Vein inserted into the curetted Eustachian tube, split and flapped so that it lines the medial wall of the tympanic space and the hypotympanum has been performed in six patients with resultant patent tube and dry ear in two instances.

Summary

It has been emphasized in the literature and is worthy of repeating that the essentials for reconstruction of the sound conduction mechanism are (1) dry ear, (2) functioning and patent Eustachian tube, and (3) dry mucosally lined tympanic cavity extending from the Eustachian tube to functioning round window.

The Pedicle Meatal Graft

In the consideration of the optimum requirements for grafting in the construction of a new membrana tympani, and in reviewing our series of tympanoplasty, approximately 40 per cent of the free grafts did not "take" adequately. Furthermore, it was noted that desquamation occurred in a high percentage of ears necessitating periodic postoperative care. This did not occur in the pedicle meatal graft procedure. For the past twenty-four months, the pedicle meatal graft has been used entirely for both transmeatal and endaural procedures.

Anatomy

For a better understanding of the meatal graft technique, consideration of the anatomy, including thickness, texture, blood supply and bony attachments is presented.

Since skin 1 millimeter in thickness is desirable, examination and review of the entire meatal skin area is desirable. The meatal skin is extremely thin over the inner one-third or bony portion of the canal wall. Superiorly at 12 o'clock on the cartilaginous portion of the canal as well as posteriorly, the skin is very thick and vascular and has to be trimmed of subcutaneous tissue before it can be utilized. Sizes of the ear canals vary greatly in diameter and length and the overall area of the graft is therefore likewise affected. One should give special attention to the suture lines, namely, (1) The anterior petrotympanic suture line. This is a prominent bony suture formed by the bony union of the petrous bone and the tympanic plate characterized many times by prominent spicules, bony exostosis, and deep crevasses which make separating the skin from the bony canal rather difficult in some cases. (2) The posterior tympanomastoid suture line. This bony suture formed by the union of the tympanic plate and the mastoid process is much less pronounced making for easier separation of the meatal skin. It is imperative that one be familiar with these variables that may exist at these suture lines in order to prepare a completely intact meatal pedicle with as wide an area as possible.

Pedicle meatal grafts, of course, vary in size due to variations in depth and diameter of ear canals. For the most part, however, our grafts have measured routinely in the neighborhood of 12-14 millimeters by 22-26 millimeters.

Technique in Pedicle Meatal Skin Grafting

I. Orthopedic preparation at least twelve hours prior to surgery with use of Zephiran Solution. Phisoderm is used prior to operation on the auricle and auricular area. It is not allowed in the external canal due to reaction of the epidermis of the canal and drum in the occasional patient.

II. Anesthesia: Heavy sedation with Nembutal, grains 3, given three hours prior to operation; Nembutal, grains 1½, one hour prior to operation; Morphine Sulfate, grains 1/6, one hour prior to operation; and Phenergan, 25 milligrams, one hour prior to operation. One per cent Lidocaine (Xylocaine) is infiltrated to block the branches of the auriculotemporal and the greater auricular nerves. A great deal of attention is devoted to the meatal injection of

Xylocaine at the anterior suture line and at the junction of the cartilaginous and bony canal wall, so that if infiltrated slowly, there will be elevation of the epidermis of the drum remnant as well as block of the tympanic branch of the auriculotemporal nerve. The same routine is followed at the petrotympanic suture line to block the auricular branch of the vagus.

III. Procedure: A. Myringoplasty, Type I tympanoplasty or modified Type I procedure in which there is a tympanoatticotomy performed with preservation of the posterior bony canal wall.

1. Preparation of the Graft: In all of the above procedures, the pedicle meatal graft is prepared as the initial step. Incision No. 1 is prepared as in the classical endaural incision by inserting the No. 15 blade into the skin at 12 o'clock and swinging posteriorly and inferiorly to 6 o'clock. The incision is located 3 to 4 millimeters distal to the bony and cartilaginous junction. Incision No. 3 is prepared with a small curved knife, beginning at the bony annulus 2 millimeters from the drum margin at a point corresponding to 4 o'clock on a clock dial and extending superficially and curved around to join incision No. 1 at 12 o'clock. The meatal skin is then separated from the anterior suture line and elevated for the entire area and circumference of the bony canal. Incision No. 4 is made in the meatal skin at 7 o'clock and extends medially as far as the bony canal wall. Incision No. 5 is the annular incision and a right angled-knife is used beginning at 6 o'clock and extending for full 360 degrees. We now have a flap of skin approximately 1.5 to 3 centimeters square and attached to the pedicle posteriorly. Occasionally, an elongation incision is necessary. The flap may be rotated at right angles to the pedicle and the thicker cutis portion and the posterior portion are utilized over the annular area. The last step in preparing this graft is the elevation of the pedicle and the graft, teasing it externally and tucking it out of the operative site in a little pool of blood and covered with cotton soaked in blood. In so doing, the surgeon affords a much better binocular view of the annulus and middle ear structure.

2. Preparation of the Graft Bed: If necessary, the anterior bony canal wall is curetted to more adequately expose the anterior annular area. The epithelial layer of the drum remnant is re-

moved. The drum is usually elevated posteriorly for wider exposure of the footplate area and to rule out cholesteatoma. Occasionally, at this point, one may elect to perform tympanoatticotomy for purposes of ruling out pathological changes in the mastoid antrum and attic wall, and to create a control drainage opening. The posterior bony canal wall is always preserved in these instances unless one is not convinced that adequate "toilet" of the cavity is impossible without removal of the canal and attic walls.

3. Application of the Graft: Following adequate stasis of the graft bed, the pedicle graft is placed in the canal, the excessive subcutaneous tissue is removed, the graft is rotated and placed over the annular area so that the attic portion and posterior canal portions are in the superior position. The margins of the graft are everted, and one pays special attention to the application of the graft anteriorly by gently tamponading the graft in contact with the drum and anterior annular area with a ring curette. Pooled blood is eliminated and air spaces are disposed of. If there is complete absence of drum being replaced, Gelfoam is placed in the tympanic cavity to serve as support. A small piece of sea sponge attached to a piece of black silk is inserted into the cup of skin formed by the bony canal. Occasionally, a small thick split thickness graft may be placed over the denuded bone posteriorly to facilitate healing. For the most part, however, epithelialization of the canal is rapid and complete without a graft, although on occasion, granulation tissue has been noted requiring postoperative attention.

4. Postoperative Care: The sea sponge is removed in fourteen days. The patient is seen on weekly visits thereafter for canal cleansing under aseptic conditions and microscopic examination until there is complete epithelialization of the canal.

B. Endaural Tympanoplasty: The same incisions and preparation of pedicle graft procedure is performed in all endaural procedures except where a "cleaning up" procedure is performed prior to a grafting technique.

Complications

1. Stenosis of ear canal — this may occur for several reasons: (a) Narrow bony canal — all narrow canals should be widened with diamond burr under irrigation. (b) Failure to thin down flap — since the thick portion of skin is utilized,

the subcutaneous tissue must be removed before applying to graft site. (c) Prominent bony suture lines — these must be smoothed down even with the bony canal wall with the diamond burr. (d) Early removal of packing — packing is not removed until the fourteenth postoperative day. This enables epithelialization. Usually epithelialization of the entire bony canal wall is rapid and complete at the fourth week postoperative check-up. In the event stenosis has occurred, Polyethylene tubing inserted in the canal will eliminate the condition.

2. Patent tympanoatticotomy — this condition has occurred in two instances. It may be avoided by maintaining the atticotomy well posterior to posterior bony canal wall. If there is reason to believe that patency will occur due to inadequate coverage of pedicle graft, a free full thickness graft may be applied to this area. However, necessity for this is rare.

Conclusions

1. The nearer the biologic relationship between grafted substance and graft site, the more likely the graft will take. Therefore, meatal skin is ideal for the new eardrum.

2. Pedicle grafts in general take more readily than do free grafts. If prepared according to the author's description, an adequate sized graft may be obtained and prepared from the meatal skin. The pedicle at the floor of the canal is approximately 4 millimeters across. While the author realized that the question of whether a small pedicle can support these grafts (the same discussions prevailed regarding fenestration flaps) the results obtained with the use of the pedicle graft are so far superior to the free graft in all aspects that the use of the pedicle meatal graft is now routine.

3. It is not implied that the pedicle graft is superior to vein grafting for repair of the drum. However, it is felt that this procedure is superior in complete replacement procedures, is ideal for all types of eardrum perforations, and is a definite adjunct in the armamentarium of the otologist.

BIBLIOGRAPHY

- Bailey, H. A. Ted, Jr.: Personal Communication.
 Bell, H. L.: Endaural Approach for Surgery of the Mastoid and Temporal Bone: Technique and Advantages. *Eye, Ear, Nose & Throat Month.* 30:199-203, April, 1951. Use of Cortisone During the Postfenestration Convalescence of Otosclerosis Patients: Results in 21 Consecutive Cases. *Eye, Ear, Nose & Throat Month.* 31:605, 1952. Technique of Tympanoplasty: Report of Cases. *A.M.A. Arch. Otolaryng.* 66:554, 1957. Transmeatal and Endaural

- Tympanoplasty: Observations from Experience of 152 Operations. *J. Internat. Coll. Surgeons*, 29:221, 1958.
- Prosthetics in the Surgical Repair of the Sound Conduction Mechanism and the Middle Ear Cavity. *Journal of the Southern Medical Association*, 53:720, 1959.
- The New Meatal Pedicle Graft for Restoration of the Eardrum. *The Laryngoscope*, 71:319-327, March, 1961.
- Guilford, F. R. and Wright, W. K.: Basic Techniques in Myringoplasty and Tympanoplasty. *Laryngoscope*, 68:825, 1958.
- House, William: Personal Communication.
- Moritz, W.: Hoverbessernde Operationen bei chronisch-entzündlichen, Prozessen beider Mittelohren. *Ztschr. Laryng. Rhin. Otol.*, 29:578, 1950.
- Ombredanne, M.: Surgery of Deafness: Fenestration in Cases of Congenital Atresia of the External Auditory Canal. *Oto-Rhino-Laryng. Internat.*, 13:229, 1947.
- Portmann, G., Portmann, M., and Clavierie, G.: *La Chirurgie De La Surdit e*, Librairie Arnette, 206:214, 1960, Paris.
- Shea, John J.: Personal Communication.
- Schuknecht, H.: The Collected Letters of the International Correspondence Society of Ophthalmologists and Otolaryngologists. Series V, Page 105, 1960.
- Sooy, F. A.: A Method of Repairing a Large Marginal Tympanic Perforation. *Ann. Otol. Rhin. & Laryng.*, 65:911, 1956.
- Sourdille, M.: New Technique in the Surgical Treatment of Severe and Progressive Deafness from Otosclerosis. *Bull. New York Acad. Med.*, 13:673, 1937.
- Tabb, H. G.: Personal Communication.
- Wullstein, H.: Erfahrungsbericht  ber 100 Fenestrierungsoperationen nach Shambaugh-Passe bei Otosklerose und Adh sivprozess (Experience with 100 Fenestration Operations According to the Shambaugh-Passe Method in Otosclerosis and Adhesive Processes). *Deutsche med. Wchnschr.* 72:1549, 1949.
- Funktionelle Operationen im Mittelohr mit Hilfe des freien Spaltlappen Transplantates (Functional Operations in Middle Ear by Means of Free Split-Flap Graft). *Arch. Ohren-Naseu. Kehlkropfh.* 161:422-435, 1952.
- Technik und bisherige Ergebnisse der Tympanoplastik (Technique and Results of Tympanoplasty up to now). *Montatsschr. Ohrenh.* 87:308, 1953.
- Zollner, F.: *Techniche Chirurgiche per il Miglioramento dela Conduzione dei Suoni dopo Operazione Radicale* (Surgical Techniques for the Improvement of Sound Conduction after Radical Operation). *Arch. Ital. Otol.* 64:455, 1953.

STAPEDECTOMY WITH VEIN GRAFT AND POLYETHYLENE PROSTHESIS

H. A. Ted Bailey, Jr., M.D.*

*This paper presented at the Eleventh Annual Reunion
of the National Mexican Society of Otorhinolaryngology,
Acapulco, Mexico, May 1-4, 1961*

Introduction

I HAD PERFORMED OVER two hundred Stapes Mobilization procedures during 1957 and the first half of 1958 when John Shea invited me to spend a week with him observing a new procedure which he had developed for the relief of deafness caused by Otosclerosis. Naturally I was quite interested but I must admit I accepted his invitation with some skepticism. However, after one week of observing his surgery, receiving cadaveric instruction in the evenings and giving careful attention to the postoperative results, I was strongly impressed with the possibilities of this newly devised surgical procedure. The procedure he demonstrated was a total Stapedectomy followed by closure of the fenestra ovalis by a vein graft and the replacement of the removed stapes by a polyethylene prosthesis. An ideal surgical result with this procedure enabled patients to enjoy the full value of their sensorineural acuity.

The procedure is carried out through the ear canal using the same incision as for the Stapes Mobilization Operation. Like mobilization surgery, this operation utilizes nature's own preferential pathway for the conduction of sound but the stapes is entirely removed instead of being simply mobilized. The basic principle of fenestration surgery is applied in the removal of the fixed footplate. The vein graft serves to close the newly created fenestra and to act as a supporting membrane. Polyethylene tubing

was utilized by Shea as a prosthesis for the removed stapes because of its safe use both in the middle ear and in other fields of surgery for several years. Number ninety polyethylene tubing is used as it has been found to accommodate almost all lenticular processes.

The new fenestra is actually one of nature's natural openings (fenestra ovalis) and this fact contributes to keeping it open. Also there is only a small percentage of cases where the extent of the otosclerosis is such that the oval window is actually obliterated by the disease. Therefore, removal of the fixed stapes should allow the fenestra to remain open permanently.

Following my work with Shea, further cadaveric surgery was carried out at the University Medical Center to further my technical ability and help insure initial success on the living patient. After numerous such sessions in the morgue, I added Stapedectomy with the Vein Graft and Polyethylene Prosthesis to my surgical armamentarium.

I soon found, to my delight, that I was able to tell with much more certainty while the patient was still on the table whether surgery had apparently accomplished its goal. Furthermore, I found myself beginning to look forward with optimism to the patient's one month post-operative visit contrary to those cases who had been mobilized and in whom results were so uncertain. I was both relieved and happy when I found almost all the patients whose hearing had improved at one month to continue to show further small gains in hearing, especially in speech discrimination ability. I observed with satisfaction that one year post-operative check-ups failed to

*Head, Division of Otolaryngology, University of Arkansas Medical Center, Little Rock, Arkansas.

show any change in hearing except for minor variation which in most cases exhibited some further slight improvement. Two year check-ups have been carried out on a small number of my patients and in no case have I seen any significant change in the hearing acuity compared to their one year check-up. Annual hearing tests will continue to be carried out on all patients to make possible a long term follow-up study.

Diagnosis

Following the taking of a careful hearing history, examination of the patient's auricle, ear canals, drums and eustachian tubes is carried out. Routine tuning fork tests are performed with special interest in the Rinne tests. Audiometric examination routinely includes pure tone air and bone conduction tests and speech audiometry including Speech Reception Thresholds (S. R. T.) and Discrimination Scores. Industrial Acoustics Corporation Audiometric Testing Booths are used to obtain standardized and reliable tests. Testing is carried out by or under the direct supervision of a qualified audiologist whose responsibility is to check every patient's test. All equipment is checked monthly for calibration on an Allison 900-C Audiometer Calibration Unit and the necessary corrections are made. The noise level in the patients' booth is well within the accepted limit for bone conduction testing.

A diagnosis of Clinical Otosclerosis is rather easily determined in most cases with all or most of the following findings: Loss of hearing, primarily conductive; normal ear canals, drums and eustachian tubes; history of progression of hearing loss; family history of progressive hearing loss; blue sclerae; tuning fork tests showing better hearing by bone conduction than air conduction confirming audiometric findings of conductive loss; good discrimination seen in speech audiometry and suggested by successful use of a hearing aid; no history of ear infections; soft voice and normal articulation of speech, paracusis willisiana; deprecusis; Schwartze sign and some degree of tinnitus.

The patient's hearing problem is carefully discussed with him and he is given printed material which further discusses all types of hearing impairments with special emphasis on Otosclerosis. Various complications which can occur are mentioned in this printed pamphlet so there can be no basis for misunderstanding by

the patient should such a complication arise following surgery.

Surgical Procedure

The technique I am now using to perform the Stapedectomy with Vein Graft and Polyethylene Prosthesis is as follows: The patient is withheld after midnight the night before surgery. At one and a half hours prior to surgery he is given ninety milligrams of Nembutal orally and twenty-five milligrams of Phenergan intramuscularly. Forty-five minutes prior to surgery the patient is given intramuscularly seventy-five milligrams of Demoral, one-two hundredth grain Atropine and three-fourth milligram Lorfan. Lorfan is a narcotic antagonist which also causes a lowering of the patient's blood pressure and tends to further depress his sensibilities. Lowering the blood pressure by the use of Lorfan results in a lessening of bleeding in the middle ear and thereby contributes to the success of the operation.

In the operating room the patient is placed on his back with his head turned to one side and the ear up. The ear is prepped with Ether, Septisol and 1:1000 Zephiran. After surgical drapes are applied, the ear is anesthetized with an injection of one c.c. of a mixture of 2% Zylcaine and 1:1000 Adrenalin in a ratio of 5:1. This injection is made using a tuberculin syringe and a twenty seven gauge needle, injecting around the circumference of the ear canal just inside the opening. An ordinary ear speculum is held in place by use of a speculum holder which frees both hands for surgery. The surgery is performed through the Zeiss Operating Microscope usually working at ten or sixteen power magnification. The operation may be divided into the following steps:

- I. A triangular stapes incision is made, the skin of the canal elevated, the drum is lifted out of its sulcus and the drum and attached skin flap are folded forward on the handle of the malleus, exposing the posterior half of the middle ear space and the incudostapedial joint with its underlying oval window niche (See Figures 1 and 2). At this point, cauterization of any and all bleeding points along the incision lines is carried out. This is necessary in order to maintain a dry field during the remainder of the surgery, the importance of which cannot be over emphasized. A 2% Zylcaine solution is then instilled into the middle ear to be certain that the mucosa is rendered insensative to subsequent surgery. This

is completely suctioned out after only a few moments delay to minimize the dangers of systemic or local reaction.

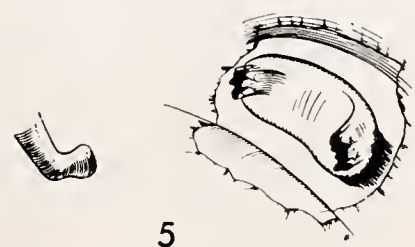
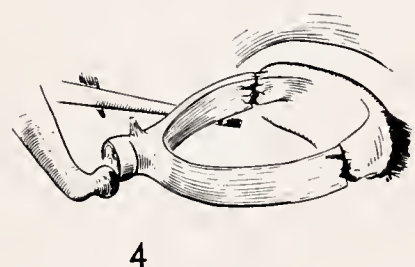
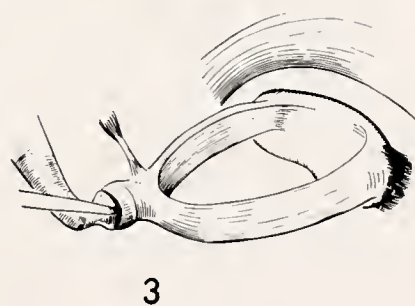
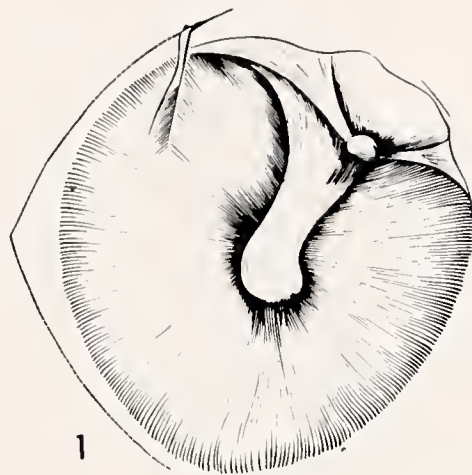
Great care is taken not to injure the chorda tympany nerve as it is gently depressed inferiorly. The posterior bony canal wall is then taken down with a Fowler curette being sure to completely expose the footplate area of the stapes with the closely placed facial nerve. Adhesions about the stapes are removed at this time with a fenestra hook if any are present. A small straight pick is next used at the capitulum to check the mobility of the stapes. Finding the stapes fixed, focus is drawn on the footplate area which is inspected and mental note is made of the pathological changes. These pathological changes are carefully described in the operative note for possible correlation with post-operative hearing results.

II. A right angle fenestra hook is used to disarticulate the incudostapedial joint and the stapedius muscle is cut with a small knife. (See Figure 3). Care must be taken not to fracture off the lenticular process of the incus while separating the joint. The stapedius muscle is easily cut using a small sickle knife, cutting the muscle close to its origin from the pyramidal eminence.

III. A small chisel is used to fracture the crura superiorly but always being careful not to inadvertently damage the facial nerve. (See Figure 4). The superstructure of the stapes is removed with cup forceps.

IV. A small right angle fenestra hook is again used as the mucous membrane is slit open on the surface of the fallopian canal to start the elevation of the mucous membrane. The mucous membrane is denuded from the fallopian canal, the footplate area, and the promontory to prepare the site for the vein graft. (See Figure 5). The mucous membrane overlying the promontory is removed last as it bleeds readily. Also the mucous membrane is especially vascular just anterior to the anterior portion of the footplate and thus free bleeding usually is seen when this mucous membrane is elevated. It is very important to completely remove every shred of mucous membrane from the footplate area, as any of it that remains may certainly produce troublesome bleeding during the removal of the footplate and this could cost the patient his hearing.

V. Following completion of the removal of



all mucous membrane for a distance of approximately two millimeters all around the footplate, gelfoam soaked in Adrenalin is placed over the intact footplate and left in this position while a section of vein is then taken, under local anesthetic, from the patient's hand, using a transverse incision. The section of vein removed is approximately six millimeters in length to insure an adequate covering of the new fenestra. The vein is tied off with 3-0 cotton and the skin is closed with 4-0 black silk sutures. Gloves are then changed, the gloved hands are rinsed in a solution of Tissue-Sol to remove all powder particles which could produce labyrinthine irritation, and then the trimming of the vein is carried out under microscopic viewing. All excess fat and connective tissue are cut away, the vein slit open and with the intima up is placed into the middle ear low on the promontory. I do not think the vein should be placed in saline or other solutions but inserted directly into the middle ear after its preparation. The gelfoam over the stapedia footplate is removed and the area is suctioned with a twenty gauge needle leaving it quite dry. A twenty-four gauge suction tip is then used and to further reduce the pull of the suctioning, the pressure gauge is turned down to fifty pounds of pressure.

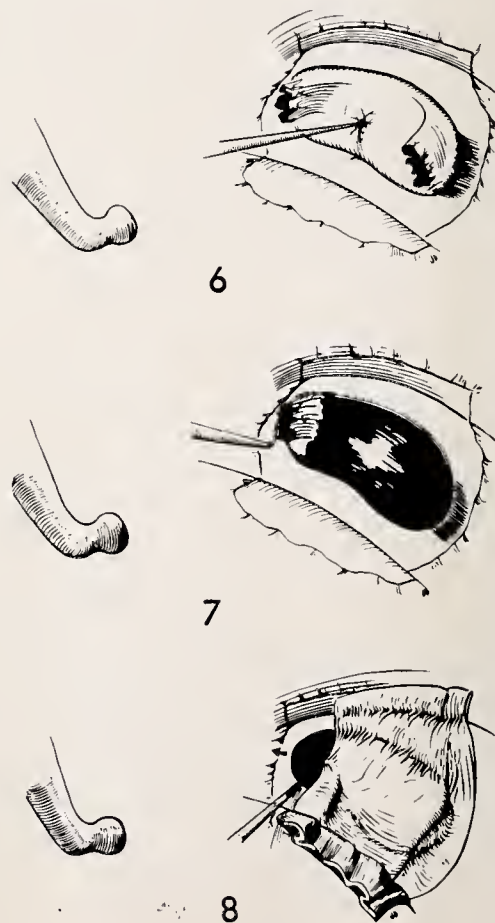
VI. The straight pick is carefully used to open a small slit in the center of the footplate, staying away from the margins as the entire footplate may inadvertently mobilize making removal more difficult. (See Figure 6). Suctioning of excess perilymph and/or blood can be safely done at this time but suctioning must of course be away from the slit in the footplate. I never suction in the vestibule or directly over an opening into the vestibule since it is best to disturb the perilymph as little as possible.

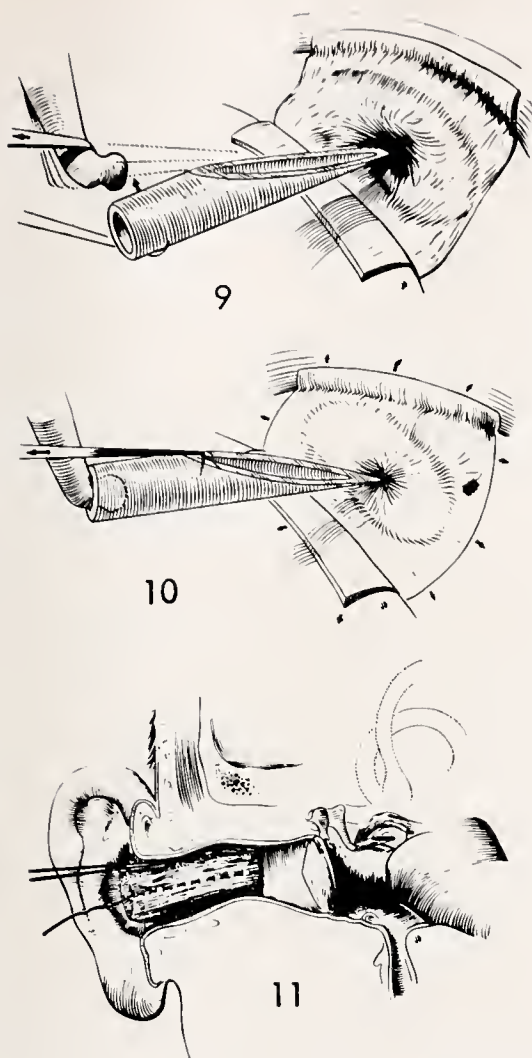
VII. A right angle hook is then passed into the small slit in the footplate and slipped under the fixed footplate. Just enough pressure is exerted to gently free and elevate the fixed footplate from the oval window. This may come loose in small fragments or several large sections. (See Figure 7). In cases of greater fixation, resort to a microscopic drill such as the Shea drill may be necessary. I stay off of the footplate with the burr when using the drill if at all possible as acoustic trauma may result. The elevated pieces of the footplate are removed from the middle ear with small cup forceps.

VIII. The vein is slid from the promontory superiorly and anteriorly in order to be pulled over and up onto the facial nerve. It is then slid down into the oval window niche in contact with the perilymph and then posteriorly until it completely covers the fenestra. (See Figure 8). The patient may notice a slight improvement in hearing at this time. This method of application of the vein is less likely to create a pumping action with its resulting disturbance on the underlying perilymphatic fluid than when the vein graft is directly applied over the fenestra.

IX. A three and one-half or four millimeter pre-cut polyethylene strut* is introduced just posterior to the long process of the incus with its tip down onto the center of the vein graft with the bevel side of the tubing facing the promontory. It seems to hold itself against the long process of the incus as it is released from the small alligator forcep with which it was introduced. A right angle fenestra hook is used in one hand to gently lift the long process of the incus while another right angle fenestra hook in the other hand is used to move the polyethylene tubing under the lenticular process. (See Figure 9). The lenticular process is lowered into the

* Richards Manufacturing Company.





tubing and then a right angle fenestra hook is placed under the beveled edge of the tube to pull it snugly onto the lenticular process. (See Figure 10). The edges of the vein are gently pulled out and then the tip of the polyethylene strut is suctioned free of any pooled blood so that inspection can be made of the vein as it is seated in the fenestra with the polyethylene prosthesis in place between it and the incus.

X. The drum and attached skin flap are returned to their original position and a cottonoid ear pack is used in the ear canal down over the incision line. (See Figure 11). The patient's subjective response to the spoken voice is obtained and hearing is ordinarily improved but has a hollow sound and is not as acute as seen in a Stapes Mobilization. Some cases may fail to admit to any improvement on the operating table but demonstrate good hearing at the one month examination. The pessimistic nature of many of these hard of hearing patients may account for their failure to admit that immediate hearing

gain is actually present. The patient is returned to his room with a head-dressing applied with little or no nausea or vertigo.

Complications

Nausea and vertigo occur very infrequently on the operating table and of course are generally considered to be unfavorable signs, nevertheless, good hearing results may certainly still be obtained. Nausea and vertigo during the immediate post-operative period is the most frequent complication and while it is usually produced by increased operative trauma, it may also be seen in cases where operative trauma would seem to have been minimal. A combination of a tranquilizer and cortisone called Sterotril seems to give good relief from the nausea and vertigo. Vertigo is very mild in most cases and usually is cleared by the end of the first week following surgery. As a rule, persistent or bothersome vertigo is seen in cases demonstrating further hearing loss indicative of general labyrinthine damage.

Damage occurred in 5.6% of the cases operated and resulted in greater hearing loss. Seven of the eighteen cases of labyrinthine damage reported were strongly suspicious of being produced by a contamination with Zephiran carried in by the polyethylene tubing which has been kept in a 1:1000 Zephiran solution. The replacement struts are now pre-cut and in individual sterilized packages*. Footplate fragments may occasionally fall into the vestibule and if very small may cause no trouble. Larger fragments however may cause persistent or recurrent vertigo and may account for occasional delayed cochlear loss, occurring several months after surgery. If a blood clot forms in the vestibule, it is safest to leave it alone. Any attempt to suction out the clot will usually also evacuate some of the perilymph which makes this objectionable as increased post-operative nausea, vertigo and cochlear damage may result. Furthermore, the clot does not seem to particularly affect the hearing result.

In two cases a right angle hook was broken off at the tip while working on a thickened footplate. No attempt was made to recover the fallen metal from the vestibule. Both patients had good hearing results and only one patient was bothered by increased vertigo but this cleared four weeks after surgery.

Only three cases demonstrated closure of the fenestra as determined by repeat surgery and all

* Richards Manufacturing Company.

three had required drilling of the footplate at the initial operation in order to create the fenestra. Following revision, one case evidenced cochlear damage and the other two again demonstrated conductive hearing loss at the one month examination indicative of rapid re-closure of the fenestra.

Fortunately in this surgical procedure I have not experienced a single case of facial paresis or paralysis but certainly this is an every constant possibility and must always be paramount in the mind of the otologic surgeon. Injury to the chorda tympany nerve occurred in 13.4% of the cases. Paresthesia of the tongue and an acid taste frequently result from stretching or severing this nerve. A change in the popular attitude of surgeons as to the importance of this small nerve will leave many more patients with a sweet taste in their mouths.

Drum rents or tears were minimal and easily handled by approximation of the torn edges of the drum or by immediate vein grafts thus in no case did a persistent drum perforation result. In none of the cases was dislocation of the incus produced and only in one case was the tip of the long process broken off; this last case was satisfactorily handled by use of a special piece of pre-cut polyethylene tubing*.

Results

For over two and one-half years I have handled most of my cases of otosclerosis essentially using the above described technique. Mobilization surgery has given results which are uncertain and usually only temporary, nevertheless, I feel that it still has value in a few selective cases. One such example where mobilization of the stapes can be used with success is in mild cases (less than 30 db Air Bone Gap) in people over sixty years of age in whom it is fairly obvious that the disease process is inactive. Mobilization surgery offers slightly less risk than is seen with stapedectomy and therefore I feel that it is still advisable for these selected cases. Resort to fenestration surgery of the horizontal canal has become a rarity and used only in obliterative cases who have good nerve function and who will agree to fenestration surgery. Since September, 1958, I have performed three hundred twenty eight Stapedectomies using the Vein Graft and Polyethylene Prosthesis. Considering only pure tone Air Bone Gap Closure (ABGC) as the measure of success, I have had

73.1% of cases show complete closure (post-operative air within 10 db of the pre-operative bone averages at 500, 1000, 2000 cps), 85.3% of cases showed 50% or greater ABGC and are generally considered as satisfactory, 4.7% of cases showed from 25% to 49% ABGC and results considered as fair, 4.4% of cases showed 0 to 24% ABGC and considered as poor, 5.6% of cases showed evidence of labyrinthine damage with further loss of hearing. Eliminating the seven cases which I feel to have been due to Zephiran contamination, the percentage of labyrinthine damage would be 3.3%. I have consistently observed that while discrimination is usually a little poor at the one month post-operative examination, it usually returns to pre-operative levels by the four-month test. However, some cases that show fair improvement according to pure tone ABGC averages demonstrate a poorer discrimination score than seen pre-operatively, especially when high tones fail to show proportionate gain to low tones. This finding at the one-month examination sometimes disappears at four months but may fail to improve, in which case it creates an unfavorable hearing result. I feel that operative trauma is the most important factor in production of these post-operative cases of varying degrees of sensori-neural damage. Bleeding that occurs after opening of the vestibule and which necessitates frequent or continuous suctioning with resulting disturbance and/or removal of the perilymph is, in my opinion, the greatest single cause of operative trauma. Schuknecht and Shea and others have already pointed out the likely operative trauma to the cochlea that may be produced by drills if the burrs are used directly on the footplate. The effect of fragments of footplate falling into the vestibule during footplate removal may manifest itself in both vestibular and cochlear damage. I also want to stress the importance of very gentle, careful placement of the vein graft as it is applied to cover the fenestra. In order to prevent any operative trauma developing during placing of the vein graft, I slide the vein from the promontory anteriorly and superiorly up onto the facial nerve, then slide it down into the anterior position of the oval window niche to contact the perilymph in the open fenestra. After it contacts the undisturbed perilymph, the graft is slid posteriorly so as not to trap air beneath the covering graft and to completely cover the fenestra. The least possible disturbance of the perilymph or its

* Richards Manufacturing Company.

underlying membranous labyrinth is thus accomplished.

The tip of the polyethylene tubing is applied by alligator forceps to the vein so that it just makes contact and does not depress the graft into the vestibule. The incus is gently lifted by a right angle hook so that the prosthesis can be placed under it without unnecessary and harmful downward displacement of the vein graft into the vestibule, thus preventing possibly labyrinthine damage.

Each individual step of the operation must therefore be considered as the most important as it is performed, as if the success of the entire operation depended on just the proper performance of that single step, as well it may! With this type of mental approach on the part of the surgeon, each patient will have the best possible chance for a technically perfect operation and thereby a good hearing result.

Summary and Conclusion

A detailed description of the surgical technique of stapedectomy with vein graft and polyethylene prosthesis as devised by Shea for the relief of hearing loss produced by Otosclerosis has been presented. Emphasis has been placed on the importance of each step of the operative procedure on the final hearing result, with attention drawn to the dangers of operative trauma especially that produced by bleeding and suctioning occurring after opening of the vestibule. Results with three hundred twenty eight cases operated using this technique were reported showing 73.1% with complete ABGC, 85.3% of the total cases

classified as generally satisfactory (50% or greater ABGC) and 5.6% showing labyrinthine damage resulting in increased hearing loss. I have continued to use the vein graft for closure of the fenestra ovalis as I am convinced that the vein is more physiological and can be better adapted to the fenestra margins than any other of the suggested tissues or gelfoam. Furthermore, the vein offers real support for the polyethylene prosthesis both initially and for the future. Cases whose stapedial footplates are obliterated by otosclerosis should not have Stapedectomies but should be handled by fenestration surgery. Revisions of closed fenestra appear unlikely to be successful and are not without danger.

In conclusion, it is my conviction that in this particular surgical procedure it is even more true that a surgeon's technical ability has a direct bearing on the results which he can expect from surgery. This is evidenced in my own case by computing the results on just the last one hundred of the three hundred twenty-eight cases described in this report. Of these last one hundred cases, 82% showed complete ABGC, 92% showed satisfactory results (50% or greater ABGC), 4% were fair (25% to 49% ABGC), 1% was poor (0 to 24% ABGC), and 3% showed further loss of hearing. Strict attention to the careful performance of each step of the operation as outlined in this presentation coupled with the ever improving technical ability of the regularly operating surgeon should promise the otosclerotic patient an ever increasing chance for a successful and permanent hearing improvement.

A PHYSIOLOGICAL ANALYSIS OF THE SIGN OF BABINSKI

William M. Landau, M.D.

Division of Neurology
Washington University School of Medicine
St. Louis, Missouri

*Abstract of the talk given before the
annual Institute in Psychiatry and Neurology held in
North Little Rock, Arkansas, March 2-3, 1961*

THE TRADITIONAL OPINION has been that the pathological extensor plantar reflex is a phenomenon independent from the flexor response elicited in the normal subject. The significance of separate avoidance behavioral patterns in subjects with intact and with injured nervous systems has not been clear. In all experimental animals except the higher primates, the avoidance motor pattern is the same whether or not the CNS is damaged.

Motion pictures and electromyography were used in the present studies.¹ Under differential spinal anesthesia both normal and pathological reflexes disappear together with pain sensation mediated by the fine myelinated delta nerve fibers, even though touch and deep sensation persist. In experiments with block of the myelinated fibers by cuff compression of the limb, both flexor and extensor reflexes can still be elicited via the unmyelinated C fiber pain pathway. For both reflexes the specific stimulus is clearly nociceptive.

In normal subjects graded stimuli demonstrate that the lowest threshold response occurs in the short flexors of the great toe. With stronger stimuli tibialis anterior and extensor digitorum longus are recruited to produce dorsiflexion of the foot; there may also be various hip flexor contractions. Extensor hallucis longus is invariably silent. There is considerable variation

in total pattern from subject to subject, and at different times in the same subject.

The pathological extensor reflex is highly similar to the normal, with the prominent exception that the extensor hallucis longus is active. Nevertheless the extensor muscle usually has *higher* threshold and longer latency than the hallux flexors. Its contraction pattern is highly similar to that of the neighboring foot dorsi-flexors, tibialis anticus and extensor digitorum longus. The degree of activity in extensor hallucis longus also seems to be the critical feature of reflex response in patients whose reflexes are variable in direction from time to time.

Block of the peroneal nerves in patients with extensor toe signs does not alter the primary contraction pattern of the hallux flexors. Thus the latter cannot be considered to be a motor pattern secondary to that of the hallux extensor.

The earliest plantar response in the spinal shock following traumatic section of the spinal cord is flexor. Only when the segments rostral to the S1 stimulus area recover, does extensor hallucis longus overcome the prime contraction in the hallux flexors to produce the extensor reflex.

It is well known that the threshold for the extensor plantar reflex is generally lower, and that the area from which it can be successfully elicited is wider than is the case for the normal reflex. Our findings suggest that this hyperex-

citability is also reflected in the efferent pattern by irradiation from the primary foot dorsiflexor neuronal pool to the neighboring extensor hallucis longus motoneurons. Thus activated, this muscle which spans two major joints has a primary action across the larger proximal ankle joint; the distal action of hallux extension is a secondary phenomenon which occurs in mechanical opposition to the primary contraction of the hallux flexors.

A collateral observation is the fact that partial or complete peripheral nerve palsy, presumably due to pressure, is the usual consequence of chronic paraplegia in man. Much of the muscle

wasting in paraplegia is thus due to denervation.

It is concluded that the normal and pathological plantar reflexes are the same essential nociceptive reflex response. The extensor response is more stereotyped and has a lower threshold. Its essential feature is the almost accidental recruitment by reflex irradiation of extensor hallucis longus into a hyperactive response normally limited to tibialis anticus and extensor digitorum longus.

REFERENCE

1. Landau, W. M. and Clare, M. H. The plantar reflex in man, with special reference to some conditions where the extensor response is unexpectedly absent. *Brain*, 82: 321-355, 1959.

FUNCTION OF THE FUSIMOTOR NERVE SYSTEM IN MAN

William M. Landau, M.D.

Division of Neurology
Washington University School of Medicine
St. Louis, Missouri

*Abstract of the talk given before the
annual Institute in Psychiatry and Neurology held in
North Little Rock, Arkansas, March 2-3, 1961*

THE FUSIMOTOR SYSTEM is a specialized group of small diameter ventral root fibers distinct from the large diameter fibers which innervate ordinary striated muscle. The fusimotor neurons also lie in the anterior horns of the spinal cord; their axons innervate the highly specialized intrafusal muscle fibers which are surrounded by the muscle spindle stretch receptors. These stretch receptors react to external muscle stretch by strong mono- and polysynaptic connections to produce reflex contraction in the muscle stretched. Thus they form the afferent arc of the tendon reflex as clinically tested, and are concerned with the reflex response to tonic stretch which the clinician evaluates as muscle tone. Shortening of the intrafusal muscle fibers by fusimotor nerve activity puts additional tension on the stretch receptors, thus sensitizing them to external stretch. Conversely, diminished fusimotor activity lowers their sensitivity. Thus the possibilities have been suggested that the hypertonia of parkinsonism and spasticity and the hypotonia of cerebellar dysfunction might be attributed to disorder of the fusimotor system.

Much earlier work has established the fact that smaller diameter nerve fibers are more susceptible to block by local anesthetic agents than are large fibers. Thus it is possible to block the fusimotor fibers without affecting the primary proprioceptive afferent or large fiber efferent

axons. Intrathecal procaine or epidural xylocaine were used to produce experimental block. Maximal strength and tendon jerk were examined in the quadriceps muscle.¹ Since the fusimotor fibers have a similar diameter range (slightly larger) to those for pain and temperature sense, it was found that the distribution of cutaneous sensory loss reflects the segmental distribution of fusimotor block.

In normal subjects the knee jerk is severely depressed (ca. 80%) before any weakness occurs. The rise in threshold of stretch receptors due to fusimotor blockade thus produces specific depression of the tendon jerks without affecting strength or proprioception. Other evidence also indicates that proprioception derives only from joint receptors and not at all from the stretch receptors within muscle. Under block there is clinical hypotonia but no cerebellar ataxia. Thus fusimotor hypofunction is not an explanation for this syndrome.

In nine patients with spasticity and in nine patients with parkinsonian rigidity it is also possible to depress the tendon jerks, largely sparing strength. Rigidity and clasp knife spasticity in the patients disappears along with the phasic stretch responses, the tendon jerks. The absence of hypertonia, however, does not produce convincing amelioration of symptoms. Even in normal subjects fusimotor block produces a degree of insecurity of gait.

Additional studies of the stretch reflex pathway activated by electrical shocks to a muscle nerve (H reflex) indicate that in normal subjects, as well as in both patient groups, the anterior horn cell motor neuron pool is maintained at a baseline level of excitability by tonic activity from stretch receptor endings. This tonic afferent activity is in turn conditioned by tonic fusimotor discharge.

It is concluded that fusimotor function is a

necessary basis for normal and hyperactive tendon reflexes and for spasticity and rigidity. No evidence is elicited to support the hypotheses that fusimotor hypo- or hyperfunction is of etiological importance in cerebellar disease, spasticity or rigidity.

REFERENCE

1. Landau, W. M., Weaver, R. A., and Hornbein, T. F. Fusimotor nerve function in man: differential nerve block studies in normal subjects and in spasticity and rigidity. *AMA Arch. Neurol.*, 3: 10-23, 1960.

WHAT'S NEW?



LESSER HAND PROBLEMS — Finger Tip Injuries

By Kenneth G. Jones, M.D.

THE AUTHOR HAS CHOSEN the term "Lesser Hand Problems" for the discussion to be presented as he feels there are no "minor hand problems". As Kanaval propitiously stated, "The hand of the working man is his most valuable asset. Without it life becomes a burden". Restoration of this asset to a maximum functioning capacity at the earliest possible date is essential to the injured workman, desirable to the surgeon, and pleasing to the employer. Lesser hand problems should be treated to a degree that they do not result in a major disability.

To be considered first are the ubiquitous finger tip injuries. The finger tip in this instance is considered to include that portion of the digit distal to and including the distal interphalangeal joint.

Anesthesia, where required, may be local consisting of a one or two percent solution of the agent without a vaso-constricting drug being added. It should be injected just proximal to the web space on both the dorsal and the volar aspects of the hand. Five to fifteen cc. usually provide adequate anesthesia after five to ten minutes. Though infrequently indicated in terminal digi-

tal wounds, a tourniquet consisting of a sterile rubber band applied circumferentially to the digit just distal to the web space and held in place with a Halsted clamp will provide a bloodless field. When used, it should be released every 20 minutes for a period of 3 minutes with its total application time not exceeding one hour. Prolonged constriction of the digital vessels could be complicated by gangrene.

Compound wounds must be debrided of all nonviable tissue and foreign material and irrigated freely with saline. Appropriate systemic therapy, including antibiotics, tetanus toxoid, and/or tetanus antitoxin, should be prescribed as indicated.

A crushed terminal digit often follows the careless closure of an automobile door. Inspection discloses an ecchymotic, painful digit with a subungual hematoma. Motion of the distal interphalangeal joint is usually restricted because of pain. On occasions, complete extension of this articulation is lacking as a result of avulsion of the extensor tendon from its insertion into the dorsal aspect of the base of the terminal phalanx. A portion of the base of the terminal phalanx may be avulsed along with the detached tendon,

or, as in the case of children, the entire epiphysis may be displaced dorsally. When present, these bony fragments must be reduced accurately and held for a period of three to four weeks. This may be accomplished by immobilization of the interphalangeal joint in a hyperextended position or by open reduction and re-attachment of the avulsed fragment by means of a Bunnell pull-out wire or by percutaneous pin fixation.

X-ray examination of the terminal phalanx may reveal a fracture at a more distal level. One often finds a comminuted fracture of the distal end of the terminal phalanx. Fractures of the shaft of the terminal phalanx, like fractures of its base, with extension into the distal interphalangeal joint, are encountered less frequently. Nevertheless, as a rule, all of these fractures can be treated by either skillful neglect or by gentle molding of the phalanx between the surgeon's thumb and index finger followed by immobilization of the digit on an aluminum splint.

Notwithstanding fractures, the pathology responsible for most of the patient's discomfort in the crush injury is the hematoma and swelling which occurs within the pulp of the digit and beneath the nail. Even though bleeding about the nail may be evident, increasing tension from osmosis of fluid into the hematoma is responsible for the patient's pain. The tension resulting therefrom remains unrelieved until an opening is made through the nail. This may be painlessly accomplished by heating the end of a bent paper clip over a flame and then applying it to the nail. A hole is burned in the nail after two or three applications of the heated clip. On rare occasions, to effectively decompress the digit, the pulp must be incised through a lateral hockey-stick incision. When tension is marked as a result of a hematoma or an infectious process, such as a felon or whitlow or following a grease gun injury, drainage should be resorted to early. Post-surgical immobilization, elevation, the application of heat or cold, depending upon the nature of the lesion, and the use of Varidase or a similar enzyme, is indicated.

Another problem frequently encountered in this area is a partial amputation of the distal portion of the digit. The nail may be avulsed and its matrix damaged. The matrix being the growth center of the nail needs to be molded into as near an anatomical alignment as possible if subsequent-distortion of the new nail is to be

prevented. If sutures are necessary, they should be applied sparingly and loosely. Complete avulsion of the nail without damage to its underlying bed may be treated with a simple pressure dressing. If the nail remains partially adhered, it should be left attached as it will constitute the best possible dressing. If a portion of the nail bed has been destroyed, this area must be covered with a split thickness skin graft to prevent scarring and to permit normal or near normal re-attachment of the new nail.

Loss of a portion or all of the pulp from the tip of the digit or the volar aspect of the digit is seen following slicing and crushing injuries. When these injuries affect the thumb, without exception, the remaining length of the digit must be preserved. Preservation of length of the fingers is also desirable but not so imperative, especially if only one digit has been injured. If bare bone, tendon, or the distal interphalangeal joint is exposed, a covering that will include a subcutaneous pad must be provided. Rarely will a local flap be available without sacrifice of bone and additional length. As a rule, the surgeon must look beyond the injured digit to the dorso-lateral aspect of the contiguous finger where the donor site can be covered by a thick split-thickness skin graft or to the palm of the hand where a flap may be raised and the donor site similarly closed. On occasions, the surgeon may choose to go beyond the affected extremity to obtain a flap. Abdominal skin and subcutaneous tissue is readily available and is almost certain to survive but has definite disadvantages. It immobilizes the arm to the abdomen for a period of two weeks. Usually there is some hair present. The subcutaneous tissue which is transferred to the digit responds when the patient gains or loses weight as any other fat-storage deposit. Also, and probably most important, sensation is never restored to a completely satisfactory degree as Pacinian corpuscles in the abdominal skin are scarce when compared to skin of the normal hand. Occasionally, especially in children, the avulsed skin and pulp, if available and not destroyed, may be resutured primarily to its bed. Should necrosis follow this effort, one of the above procedures may be resorted to at an early date.

If the injury has left adequate pulp, such as in the case of a complete amputation of the digit through the nail, the bone may be trimmed back slightly so that most of all of it is then covered

by the healthy surrounding fat and the wound covered by a free skin graft of the Stent type. A full-thickness skin graft, without subcutaneous fat, from the volar aspect of the wrist will provide excellent coverage, if it adheres. However, the occasional operator will obtain more primary takes by using a thick split-thickness skin graft from this same area. The use of a stent over the skin graft will also increase the surgeon's successes. This may be prepared by cutting the silk sutures long that have been used to secure the edges of the graft to the digit and then tying them to one another over a small fluff contoured over the graft. Failure of the graft to survive will be assured by the presence of a hematoma, infection, or movement of the graft on its bed. A stent should eliminate a hematoma and motion. An outer dressing is applied, and both are left undisturbed for five to seven days, unless subsequent complaints by the patient suggest that inspection of the wound is indicated. After the initial dressing has been removed, daily soaking in warm water for a period of 15 minutes followed by application of toilet lanolin and gentle massage is recommended. Maturing of the adhered graft is thereby expedited.

Traumatic amputations of the terminal phalanx occur at all levels. They should be closed primarily. If amputation is distal to the junction of the proximal and middle thirds of the phalanx, closure can be effected by local flaps with or without minimal additional amputation of bone. This technique is often the procedure of choice. If local flaps are not adequate without additional significant shortening of the phalanx, then closure by one of the methods described above will produce an excellent digit in most instances. When amputation has occurred at the junction of the proximal and the middle thirds of the phalanx, the proximal third of the digit may be worth retaining, depending upon the desires and activities of the patient. In this event, coverage is accomplished by one of the methods considered. However, in certain individuals and in most instances where the amputation is through the proximal third of the phalanx, a more satisfactory digit will be obtained if re-amputation is performed through the distal interphalangeal joint with the extensor mechanism being transected as far proximally as possible after which the profundus tendon is pulled distally and cut at a high level. The long flexor and long extensor

tendons are never sutured to one another across the end of the middle phalanx. This error will not only often produce a sensitive amputation stump but will result in limitation of motion of the contiguous digits as well as the injured digit due to the inter-relationship between the tendons. The cartilage should be removed from the head of the middle phalanx with a small rongeur so that the subcutaneous tissue will adhere directly to the bone. The lateral flare of the head of the middle phalanx is also resected with the rongeur to prevent a bulbous amputation stump. The digital nerves are identified at the inferior borders of the digit and gently pulled down and transected at as high a level as possible in order to prevent a painful neuroma. The digital vessels are ligated with 3 or 4-0 plain catgut. When possible, skin flaps are fashioned so that the resulting scar traverses the mid-portion of the amputation stump.

As stated earlier in traumatic amputations through the terminal phalanx of the thumb, length is not sacrificed. The only exceptions are gangrene or uncontrolled infection. The surgeon is obligated to provide proper coverage to the injured thumb by one of the acceptable methods described.

Mallet finger, often erroneously referred to as baseball finger, is a condition resulting from an avulsion of the extensor tendon with or without a small bone fragment from the base of the distal phalanx. As a rule, this follows forced flexion of the digit at the distal interphalangeal joint while the extensor mechanism is in a contracted state. The recently injured digit reveals a volar flexion deformity of the terminal phalanx of 15 to 45 degrees. Treatment of this injury is always difficult and often unrewarding. The author has found the method described by Logue to be a reasonably satisfactory method for closed management of the acute mallet finger. This consists of the application of a forearm gauntlet with construction of an anvil in the palm over which the involved digit is immobilized in a 90-90-190 degree position by means of adhesive tape. Immobilization must be continued for a period of at least four to six weeks with the tape removed and reapplied frequently for finger toilet. The treatment of an old chronic mallet finger comes under the head of reconstructive surgery is not considered in this discussion but is considered in reference 1. Chronic and acute ligamentous strains

and post-traumatic arthritis involving the terminal interphalangeal joint are encountered frequently. These injuries usually respond satisfactorily to the intra-ligamentous or intra-articular injection, $\frac{1}{4}$ - $\frac{1}{2}$ cc., of Hydrocortisone (Cortef) followed by immobilization of the digit on an aluminum splint for a period of one to two weeks.

The management of frostbite or primary vascular insufficiencies is similar to treatment of a burn. Treatment is dependent upon the depth of the injury. Gangrenous tissues must be removed when demarcated and the viable structures covered by proper skin transference procedures.

Transection of the flexor digitorum profundus at the level of the distal interphalangeal joint

is repaired by distal advancement of the tendon and its re-suture to the volar aspect of the base of the distal phalanx by means of a Bunnell pull-out wire. On occasions, it will be necessary for the surgeon to make a mid-lateral incision in the digit proximally, usually about the level of the mid-portion of the proximal phalanx, to find and pull down the retracted profundus tendon. (Proximal retraction is limited by the origin and insertion of the lumbrical muscles.) As a rule, this method will provide a gratifying result.

REFERENCES

1. Jones, K. G.: Mallet Finger, *Ark. Med. J.*, 56:442-446, April, 1960.
2. Logue, J. T.: Acrylic Cast for Baseball Finger, *U. S. Armed Forces M. J.*, 5:757-758, May, 1954.

TEACHING SEMINAR

*Department of Medicine
University of Arkansas Medical Center
Little Rock, Arkansas*



ORAL HYPOGLYCEMIC AGENTS

W. R. Brooksher, Jr., M.D.
Chief Resident

IN VIEW OF THE RELATIVELY recent and ever expanding use of the oral hypoglycemic agents, particularly since the increasing age of our population promises to make diabetes an even more common disease than it is now, I felt a brief review of this subject might be useful and pertinent. Prior to insulin many preparations were used for relief of the symptoms of this disease; few, if any, yielded real benefit. With the discovery of insulin in 1922 all of our problems seemed to be solved: insulin deficiency caused the disease and all of its metabolic and widespread tissue consequences would be avoided by the administration of the hormone. That the search for new methods of therapy has continued is due to the inconvenience of insulin administration, to the realization that its lack may not be the only factor in diabetes, and to our awareness that all problems of diabetic control are certainly by no means solved by its use.

In 1918 guanidine was found to be a hypoglycemic agent but neurotoxicity precluded clinical use. In 1926 Synthalin "A" and then "B" were introduced, however, a not too well documented, hepatotoxicity led to their abandonment. The hypoglycemic effect of several sulfonamide com-

pounds was first mentioned by Ruiz (1) in 1930, but they were not really studied until 1942 when Janbon (2) noted neurological disturbances due to hypoglycemia in patients treated with a derivative of sulfonamide. The first real clinical advance was made in 1955 when Franke and Fuchs (3) (along with other Germans almost simultaneously) reported the substitution of carbutamide (a sulfonamide) for insulin in a number of maturity onset diabetics. Extensive clinical trials confirmed this, however, it proved too toxic for general use. Nevertheless, this provided the necessary breakthrough and many sulfonyl compounds have since been studied. Tolbutamide* has been used most extensively in clinical practice but chlorpropamide** has also had considerable clinical trial.

Although there are definite limitations on the use of these compounds in the treatment of diabetes, they have stimulated renewed vigor in research in the field and much knowledge has been gained of the physiologic function and mode of action of insulin in addition to basic information of the metabolic abnormalities of diabetes. Furthermore, interest has again been aroused in

* Orinase, Artosin, Dolipol, Rastinon.

** Diabinase.

the search for other compounds with hypoglycemic properties and a new synthetic diguanide, phenethylbiguanide***, is receiving widespread clinical study.

The hope of this paper will be to review the major aspects of the mechanism of action, and the rationale and principles of use, of these compounds.

Ideally such an agent should mimic insulin; it should directly increase glucose utilization by depancreatized animals and tissue preparations in vitro, also, deposition of muscle glycogen, long chain fatty acids and protein synthesis should be stimulated. There are several alternate means by which a decrease in blood glucose may occur. This would follow from a direct effect on the liver in decreasing hepatic glucose production or from inhibition of gluconeogenesis by an action on the pituitary-adrenal system. They might also function by increasing the availability of endogenous insulin; either by inhibition of "insulinase", i.e., by a diminished rate of degradation, or by stimulating insulin production and release from the pancreas.

The Sulfonyleureas

The various sulfonyleureas exert their effect in essentially the same manner and will be considered as a group. Since this review is intended to be oriented primarily along clinical lines it does not seem useful to present details of the quite large number of studies carried out to determine the mechanism of action. Suffice to say that in spite of this mass of information the mechanism remains not clearly defined. There are several reasons for the lack of clarity: 1) as with most pharmacologic agents the sulfonyleureas probably have secondary effects which may be complementary, antagonistic or unrelated to their hypoglycemic action; 2) results obtained in laboratory animals are not necessarily valid for man since, quite apart from species differences, the metabolic changes in experimentally induced diabetes differ in so many respects from those in the naturally occurring syndromes in man; 3) the factors which influence the blood glucose concentration are numerous, complex, interdependent and inadequately understood, and too little is known of the sites and mechanism of the action of insulin; 4) similar and apparently carefully conducted studies have often yielded conflicting results; 5) and finally, it is probable that several

mechanisms are involved. More detailed reviews with extensive bibliographies should be consulted for further information (4). There is now rather general agreement that the sulfonyleurea compounds exert their effect chiefly by stimulating the release of insulin from the beta cells of the islands of Langerhans. The details are not yet clear but that it does occur has been shown by the finding of additional insulin (or a substance with insulin-like activity) in the pancreatic vein blood following their administration. Further, there is a definite decrease in the granulation of the beta cells following acute administration of these compounds. This is also supported by the fact that these compounds are not active in depancreatized men or animals and that the diabetic patients who respond best are those in whom there is good reason to believe a considerable capacity to produce insulin remains. Conversely, in the usual juvenile type, whose ability to produce insulin approaches zero, the compounds are not effective. If these agents indeed cause the release of insulin and exert their effects through endogenous insulin, one might expect to find all the known metabolic results of this hormone after such therapy. However, though some reports have been at variance, most laboratories have been unable to demonstrate an increased utilization of glucose by peripheral tissues (5). Following their administration it is difficult, if not impossible, to demonstrate a rise in respiratory quotient, an increase in the arterial-venous glucose difference, a decrease in the serum phosphorus, or increase in lactate or pyruvate levels following intravenous administration of glucose (6). In an effort to explain these findings the concept has gained considerable support that the chief effect of the insulin released by these drugs is in the liver where it acts to reduce hepatic glucose output and thus contribute to the decrease in blood glucose. Insulin not bound therein would be free to act peripherally.

Other ways in which the sulfonyleureas might exert their effect have been tested with negative, or at best, inconclusive, results. There is little or no support for the idea that they have a direct effect on the liver. It was once thought they might act by damaging the pancreatic alpha cells and thus inhibiting the production of glucagon, but this has been disproved. The concept of an inhibition of insulinase with a consequent decrease in the destruction of endogenous insulin has found

*** DBI, Phenformin.

no real foundation in fact and finally, they appear to have no antagonistic effect of the action of the pituitary, adrenals, thyroid or gonads and remain active in the absence of these glands.

The selection of the proper patient, i.e., of the proper diabetic "type" is all important in the use of these drugs. While it is quite true that not all patients selected using all possible criteria will respond, it is equally true that virtually none of those eliminated by those same criteria will benefit from these agents. Diabetics have long been separated into two groups: the juvenile, unstable or insulin sensitive and the maturity onset, stable or relatively insulin resistant. It is this same separation which must be kept in mind in the choice of which patients may be helped with the oral agents. Those of the insulin sensitive, juvenile type who are completely insulin dependent and develop severe ketoacidosis upon its withdrawal do not respond to the sulfonylureas. Those who are relatively insulin resistant, who, in the absence of infection or other stress, do not develop ketoacidosis even without insulin, generally are responsive to these drugs. It has recently been said (6) it is the age of onset, rather than the present age, which is important as a determining factor and while this certainly is generally true I would emphasize that in reality it is the *type* of diabetes which is important. We have all seen the occasional patient in their sixth or seventh decade with a recent onset of diabetes who is clinically, in every way, a classical "juvenile" diabetic. Though there is no arbitrary dividing line the generalization is often made that from 70-80% of the patients who develop their disease after the age of forty will have the usual insulin insensitive type while the remaining 20-30% and almost all of those who have the onset of their disease before the age of thirty-five will be insulin dependent. Thus, as a general screening aid, the age of onset may be said to be the most important single factor in determining the possibility of long-term responsiveness to the sulfonylureas. Although an occasional young patient whose insulin requirement is small and whose diabetes is of recent onset may respond for a time, lasting benefit is rare among these individuals. Also, an occasional patient who by all counts promises to be helped will be found to be completely unresponsive. There is no clinical way to predetermine who these patients will be. In view of this difficulty in anticipating the long range value of such

therapy attempts have been made to predict the course by a single oral or intravenous dose-response situation. There has been wide disagreement concerning the value of this test: some have felt it to be a reliable guide to clinical success or failure, while others have said it is of limited or no value (4). I suppose rather than side-stepping the issue I should take some sort of a stand and will say I feel the test has little clinical use in the context we are presently discussing, have rarely used it and have less often found it to be of aid in my personal management of a patient. If one should desire trying it I feel that a negative result (i.e. no significant decrease in the blood glucose following the intravenous administration of the drug) is a good indication that the patient will not respond; however, a positive result in no way yields any certainty that one will obtain a good or lasting response. This test is described in detail elsewhere (7).

Even when all guiding principles are observed many apparently suitable candidates will fail to be controlled by these agents. The only certain method of identifying responsive patients is by careful clinical trial; thus the matter of initial selection becomes of utmost importance. Patients whose diabetes can be controlled with ease by dietary restriction should not, in my opinion, be given these drugs. Obesity should not be supported with oral agents, nor with insulin for that matter. On the basis of careful clinical trial there is general agreement that 60 to 65% of the total diabetic population will respond to long term therapy with the sulfonylureas. Not all of these really require such treatment however, and the estimated percentage who do varies widely; largely due to national and individual differences in attitude toward diet and obesity and varying standards of control. Probably somewhat less than 25% of our total diabetic population should be placed on these drugs. In short, those most likely to respond and who should be placed on oral therapy are those who have the relatively insulin resistant type of disease, who require a daily insulin dose of 40 units or less and those patients who are not obese or, as a last resort, in those who come to grips with their obesity but can't really control it. It is also true that one will have better results with those whose untreated fasting blood sugar is not significantly over 300 mgm%.

It should be mentioned that the sulfonylureas

do not actually improve the patients glucose tolerance, the range through which the blood glucose moves during the day is not narrowed, the absolute values are simply lowered. In fact, in a responsive patient, the pretreatment pattern is reproduced at a lower level. Since the tolerance is not changed some degree of dietary restriction is a necessity if undue hyperglycemia is to be avoided—quite apart from dietotherapy for weight control purposes (4).

After a patient has been chosen for this form of therapy the usual procedure is simply to place him on an adequate dose of the drug and in the following days observe the effects on the blood and urine sugar. In those patients who are not receiving insulin and who have no acute symptoms this sort of therapeutic trial presents no great problem. Dunlop (8) has recommended that this sort of patient be given an inert tablet for a control period, pointing out, quite properly, that a surprisingly large number will then make renewed efforts to adhere to their prescribed diets to “give the tablets a chance” and satisfactory control results. Only after this has failed does he make use of the sulfonylureas. Academically this is very sound practice, however, it would seem to present several problems and implications in private practice which I am in no position to evaluate. Almost all workers in this field have repeatedly emphasized that much caution is needed in transferring insulin taking patients to the oral drugs and it has been stated that the withdrawal or reduction of even a moderate dose of insulin from patients who seem to be in every way suitable for therapy with these compounds will result in a small number developing severe ketoacidosis with some rapidity (4). In those patients receiving less than 20 units daily one may usually discontinue the dose abruptly when substituting the oral agent; providing of course, that reasonably close contact with the patient is to be maintained. In those patients receiving 20 to 40 units daily some (6) say the insulin dose should be reduced by 25 to 30% daily or every other day while observing the effect of the sulfonylurea compound and, if the result is favorable, the administration of insulin may be discontinued entirely within a few days. In those whose insulin requirement is more than 40 units daily the transition period should be accomplished in a hospital. In this latter group it would seem generally unwise to even attempt

oral therapy though, of course, we all see the occasional patient whose insulin dose has inadvertently been gradually raised far beyond that which is actually required; usually through the vicious cycle of gross dietary excesses or the rebound or Somogyi phenomenon (9). Some clinicians tend to effect the change-over by abruptly stopping the insulin dosage while others prefer to gradually move into the transition. The latter method increases the danger of hypoglycemic episodes and both prolongs and increases the difficulty of assessing the response to the new agent. In the diabetic clinic at the Medical Center we have felt the abrupt withdrawal of insulin used concomitantly with full therapeutic dosage of the sulfonylureas was best suited to our needs and to the best of my knowledge have as yet occasioned no unfortunate consequences. Perhaps we have been unusually fortunate in our selection of patients. Whichever method is used the patient should ideally be seen every two or three days for the first week. If this is impractical they should at least check their urine for sugar and acetone daily, preferably four times per day, and report to their physician should ketonuria develop. Although the maximal hypoglycemic response usually occurs on the first day some patients fail to show their full response for several days. An accurate assessment of the situation is usually possible with one to two weeks, but final regulation may require several weeks.

The appearance of ketosis in a patient usually well controlled on an oral agent indicates a need for insulin therapy since increasing the dose of the sulfonylurea will not be effective. Similarly, when such a patient is presented with unusual stress, such as an operation or infection, he should be carefully observed for metabolic decompensation. Should this occur insulin therapy is again required.

There is some individual variation in the minimal effective plasma level of these agents required to maintain a proper control of the blood glucose. The size of the daily dose needed is primarily dependent upon the plasma “half-life” of the drug (8). Chlorpropamide has a half-life of over 30 hours and thus only one daily dose is necessary; usually this will range from 250 to 1000 mgms. However, gastrointestinal side effects are often noted when over 500 mgms is given and doses of 1000 mgms are best given divided. Tolbutamide

has a half-life of only 4 to 8 hours and consequently the drug must be given two, and often three, times per day. No single dose should exceed 1.5 to 2.0 gms since neither the magnitude nor duration of response is enhanced by further increases. An occasional patient who has failed to respond to lower dosage will do so to 3.0 gms per day; however, by far the majority of patients who respond to this agent will do so with 2.0 gms or less.

Primary failures to these drugs are obviously those patients who fail from the beginning to show any satisfactory response. The so-called secondary failures are those who initially respond but after a month or so become refractory. Some have reported secondary failure rates as high as 65% (quoted from Duncan) but I feel most of these represent poor initial selection or disregard to diet and other exogenous factors. Nonetheless, true resistance does seem to occur in some 5 to 10% of the people initially manifesting a good response (4). The secondary failure rate from chlorpropamide is not yet known and while in most patients failing to respond to one of the sulfonylureas there is little hope in trying another it is true that some who have developed resistance to tolbutamide may be managed with chlorpropamide.

The toxicity of these two drugs is quite low and generally include only minor gastrointestinal disturbances, skin rashes and transient leukopenia which will often revert to normal even if the treatment is continued and are seemingly always reversible if the drug is withdrawn. Hepatic, renal, thyroid or cardiovascular complications due to tolbutamide have not been demonstrated. Jaundice due to intracanalicular biliary stasis has occurred with chlorpropamide and occasionally symptoms of lethargy, muscular weakness, ataxia and dizziness have been noted. These seem to be due to a direct action on the central nervous system and not to hypoglycemia. In addition, even with currently smaller doses, there are occasionally cases of prolonged hypoglycemia due to the slow excretion. Serious hypoglycemic reactions are rare with these drugs, though they do occur and one fatal reaction has been reported due to tolbutamide in a malnourished patient 86 years old (8).

The Biquanides

Although it is not yet certain how the sulfonyl-

ureas and guanidine derivatives exert their effect and with the latter drugs the data have at times been contradictory and often the interpretation of results by different workers has been divergent, nonetheless, enough is known to be certain that their pharmacologic actions are quite different for phenformin can reduce the blood glucose of depancreatized and completely allopanized animals or in normal animals. Strangely while they lower blood glucose in diabetic humans they do not in those who are non-diabetic. Again the details of experimental work seem best omitted, particularly in this situation where some considerable degree of chaos exists in the literature. In vitro studies have demonstrated the ability of phenformin to inhibit electron transport and enzymatic oxidation at the succinic dehydrogenase and/or cytochrome oxidase level in muscle, adipose tissue and liver. This inhibition has been held to account for the hypoglycemic effect of phenformin. Recently, however, Ungar (as quoted by Duncan) has cast some doubt on this hypothesis and all we can say is that the mechanism of action is unknown.

As suggested above the selection of patients with this drug is somewhat different than with the sulfonylureas. The majority of diabetics, regardless of the type of disease they have, are responsive to some extent to the hypoglycemic effect of phenformin. In the group of patients benefiting from the sulfonylureas, phenformin has a roughly comparable effect; furthermore, it is capable of some blood glucose-lowering action in certain young patients with the unstable, insulin sensitive type of diabetes. Despite this wide range of effectiveness its general use is much restricted by the incidence of gastrointestinal side effects. Given in adequate dosage most stable diabetics could probably be controlled with this agent, however, the side effects often preclude this adequate dose. In many patients who are responsive to, but inadequately controlled by, the sulfonylureas the addition of a small dose of phenformin offers great promise. Many patients with labile diabetes, readily developing ketoacidosis on the withdrawal of insulin, are also responsive to phenformin; however, most such patients continue to require insulin in addition, though in much smaller doses. It has been said (4, 8), and our limited experience would seem to agree with this, that many labile, poorly controlled diabetics may benefit with the

addition of phenformin to their regimen by much smoother control on more moderate doses of insulin. This requires more detailed, careful study, however, phenformin has certainly been found to reduce markedly the insulin requirement in insulin resistant diabetics. It would seem that this combination of phenformin with insulin or a sulfonylurea will prove to be the main indication for the drug though it is too early to dogmatically categorize the place of this agent in our therapeutic armamentarium.

The fall in blood glucose concentration begins about two hours following a dose of phenformin and lasts for some six to fourteen hours. Thus the drug needs to be given two or three times a day. The dose required differs from patient to patient; many mild, stable diabetics can be controlled with 50 to 100 mgms daily though probably the majority will require about 150 mgms. A considerable reduction in the insulin requirement of "juvenile" diabetics may be effected with the same dosage. Anorexia, nausea, vomiting and diarrhea occur early in the treatment of many patients, but such side effects can generally be avoided by not exceeding a daily dose of 150 mgms, though some may tolerate much higher doses. Although gastrointestinal complaints occur in some 40 to 60% of patients, they are sufficiently severe as to preclude continued therapy in only 20 to 30%. More serious side effects have not been reported. The occurrence of ketonuria in patients receiving biguanides has long been recognized and there has been general agreement that this is related to inadequate carbohydrate utilization and will disappear with an increase in dietary carbohydrate and perhaps an increase in the insulin dose along with a decrease in the dose of phenformin. Apparently symptomatic ketoacidosis has not been a significant problem in the experience of most clinicians. However, Walker and Hannah (10) noted ketonuria in 34 (29.1%) of 117 patients; an alkali reserve of less than 20 mEq per L. was found in thirteen. Their experience emphasizes the fact that, particularly in patients with "juvenile" diabetes, insulin must form the basis and mainstay of treatment and phenformin must be used only as a supplement. Nonetheless, in certain patients of this type phenformin may smooth out the course and reduce the insulin requirement by as much as 25 to 50% (6).

In the management of patients with the oral hypoglycemic agents the standards of control are no different than for any other type of therapy. The only consideration worth mentioning would seem to be that by far the majority of the patients one has on this form of therapy will be in the older age group with stable diabetes; these people don't develop the acute complications of ketoacidosis anyway and it is far too easy, for myself at least, to adopt a rather casual attitude toward their control. We tend to feel they need only be followed with an occasional urine check. Actually, of course, the urine should be checked four times per day until they become quite well stabilized and even this method should be used only after sufficient blood glucose values have been obtained to enable us to know what a given urine sugar value indicates in each patient. This is particularly true since the "renal threshold" for glucose will be considerably elevated in many of this group. We find twenty-four hour urine glucose determinations quite useful in following these people. In the use of phenformin the criteria of control will simply depend upon whether it is being used in one type of diabetic with a sulfonylurea or another type in combination with insulin. Certainly to justify its use the control must be better than before it was added.

Summary

The way in which the sulfonylureas and the biguanides exert their hypoglycemic effects is still unknown. With regard to the sulfonylureas it is certain that, 1) the presence of endogenous insulin is essential for their hypoglycemic action; 2) they stimulate, at least initially, the release of insulin from the pancreas; and 3) they reduce hepatic glucose release. The most widely accepted belief is that the mechanism of action is due to the release of insulin and the effect of such insulin first in the liver with decrease in the hepatic glucose output. Action in the periphery of insulin not bound in the liver is not precluded. When used in connection with careful dietotherapy the sulfonylurea compounds provide "good" or "fair" control of hyperglycemia and glycosuria in 50 to 70% of patients with the onset of their disease after age forty and requiring 20 units or less of insulin. The frequency of significant side effects from tolbutamide is small and it is well tolerated by most persons. Chlorpropamide is also relatively free from side effects if used in dosages of no more than 500 mgms daily. Larger

doses may lead to prolonged hypoglycemia. Reversible, cholestatic jaundice may occur though few cases have been reported in recent years with smaller doses. Secondary failures do occur, but poor adherence to diet, poor initial selection and inadequate dosage seems to account for most of those reported. The biguanides seem to be effective in the same group as the sulfonylureas; further, as a supplement to insulin they may reduce the insulin requirement and assist in the control of the young, insulin sensitive diabetic. An inhibition of oxidative metabolism and an increase in anaerobic glycolysis seem the most likely mechanism through which they exert their effect but this is far from certain. Amounts of phenformin greater than 200 mgms per day cause a very significant incidence of gastrointestinal side effects but no case of true tissue or organ toxicity has been reported. It is important to bear in mind that the exact metabolic effects of these drugs are not known and that any ultimate effect they may have on our real purpose in the treatment of diabetes, i.e., the long term complications, is purely speculative at present. These drugs are surely no more the final answer to the diabetic question than was insulin forty years ago; however, they would seem to be a most valuable addition to the therapy of this disease.

BIBLIOGRAPHY

1. Ruiz, C. L., Silva, L. L. & Libenson, L.: Contribución al Estudio Sobre la Composición Química de la Insulina. Estudio de Algunos Cuerpos Sintéticos Sulfurados con Acción Hipoglucemiante. Rev. Soc. Argent. Biol. 6: 134, 1930. (quoted from Duncan)
2. Janbon, M. Chaptal, J., Vedel, A. & Schaap, J.: Accidents Hypoglycémiques Graves par un Sulfamidothiozol. Montpellier méd. 21-22:441, 1942. (quoted from Duncan)
3. Franke, H. & Fuchs, J.: Ein Neues Antidiabetisches Prinzip: Ergebnisse Klinischer Untersuchungen. Dtsch. med. Wschr. 80: 1449, 1955.
4. Duncan, L. J. P. & Baird, J. D.: Compounds Administered Orally in the Treatment of Diabetes. Pharm. Rev. 12: 91, 1960.
5. Stadie, W. C.: Is the Metabolism of Peripheral Tissues Affected by the Arylsulfonylureas? Diabetes 7: 61, 1958.
6. Marble, A.: Critique of the Therapeutic Usefulness of the Oral Agents in Diabetes. Amer J Med. 31: 919, 1961.
7. Marble, A.: Oral Hypoglycemic Agents in the Management of Diabetes. Med. Clin. North America 42: 1163, 1958.
8. Dunlop, D. M.: Clinical Use of Oral Hypoglycemic Agents, pp. 307-314, in Astwood, E. B., *Endocrinology I*, Grune & Stratton, New York, 1960.
9. Somogyi: Exacerbation of Diabetes by Excess Insulin Action. Amer. J. Med. 26: 169, 1959.
10. Walker, R. S. and Hannah, R.: Experience with Phenformin. A Two-year Study. Diabetes 10: 275, 1961.

ELECTROCARDIOGRAM



OF THE MONTH

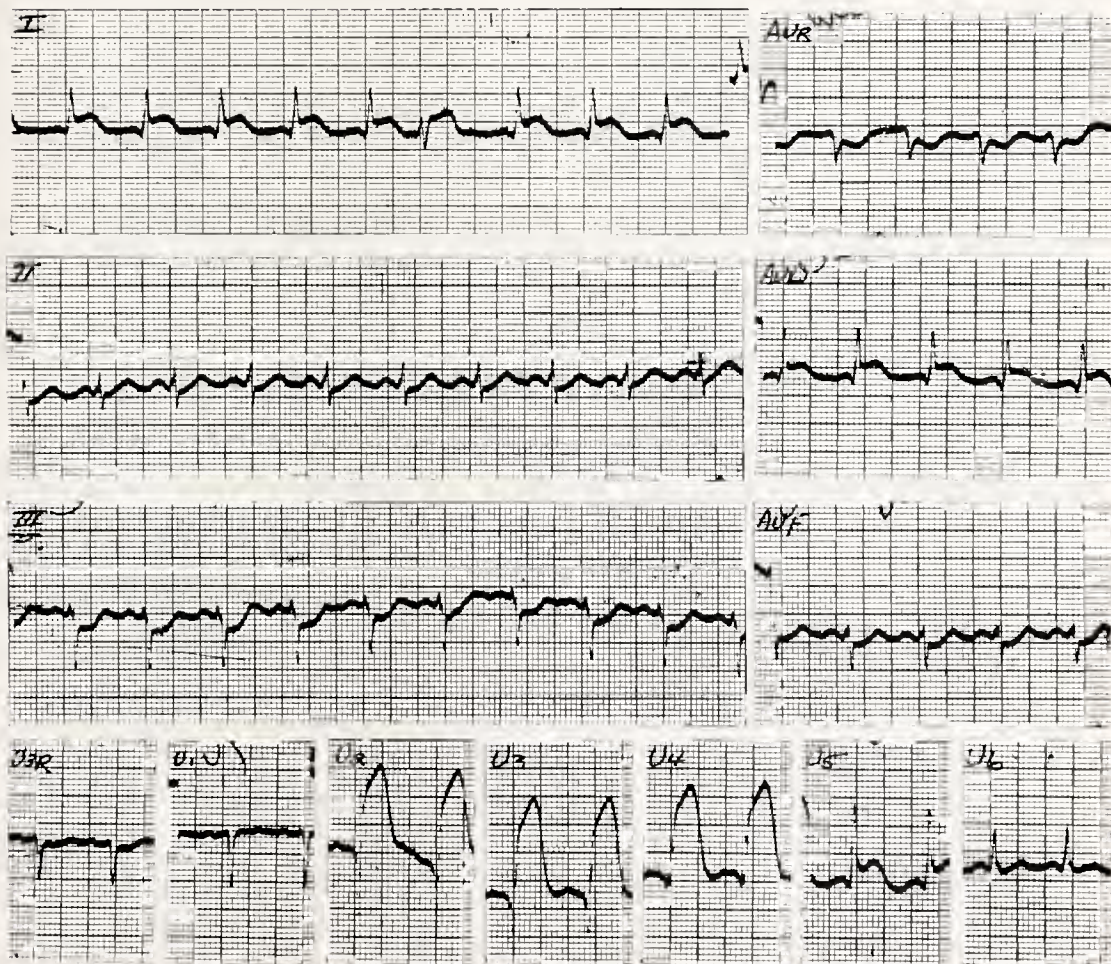
WHAT IS YOUR INTERPRETATION?

Age: 70 Sex: M Build: Stocky Blood Pressure: 94/60

Medication: None

History: Substernal pain 1½ hours prior to electrocardiogram

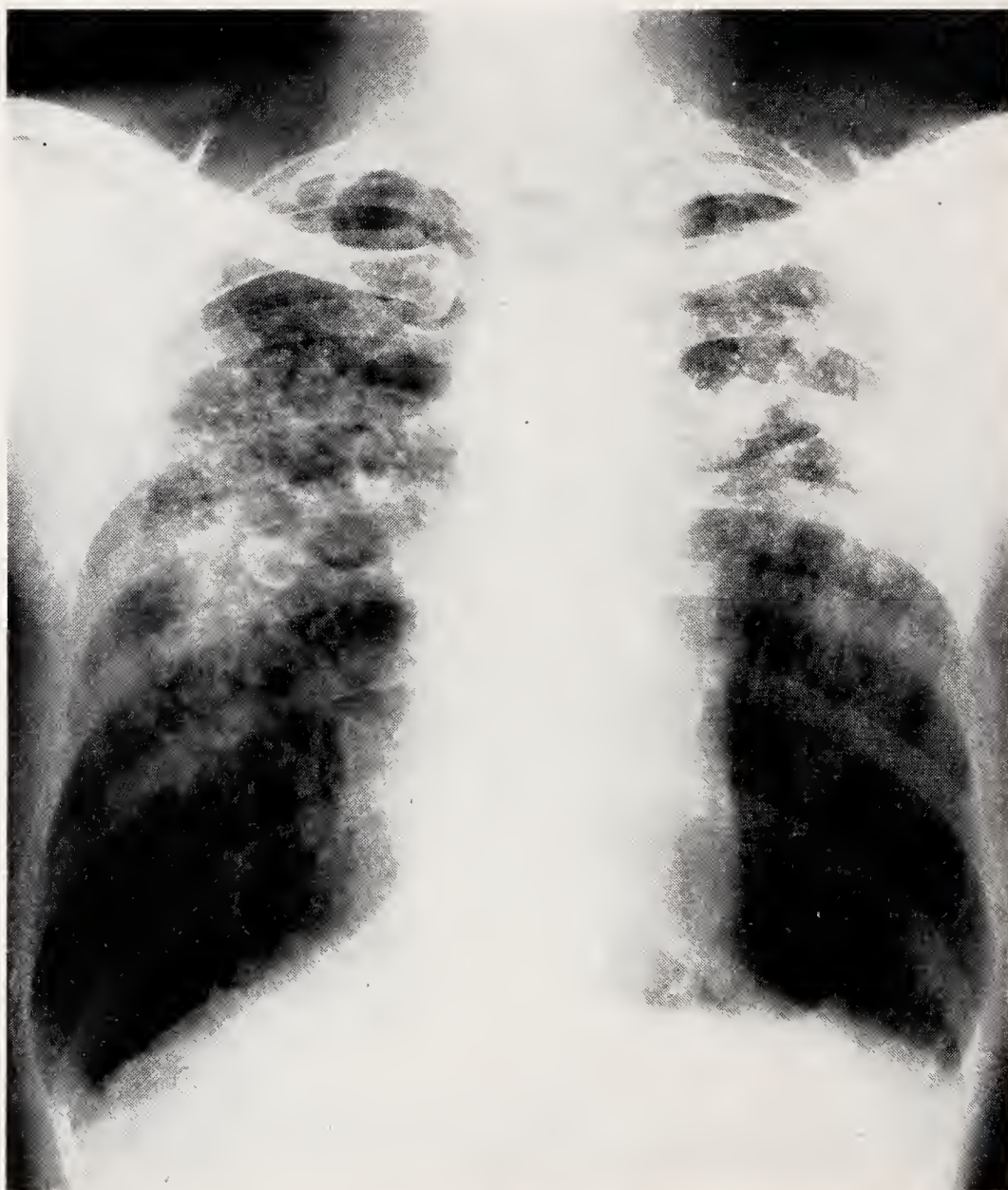
ANSWER ON PAGE 471



Prepared by J. S. Taylor, M.D., Professor of Medicine

The Department of Medicine
University of Arkansas Medical Center

WHAT IS YOUR DIAGNOSIS?



*Prepared by the
Department of Radiology, University of Arkansas
School of Medicine, Little Rock*

ANSWER ON PAGE 474

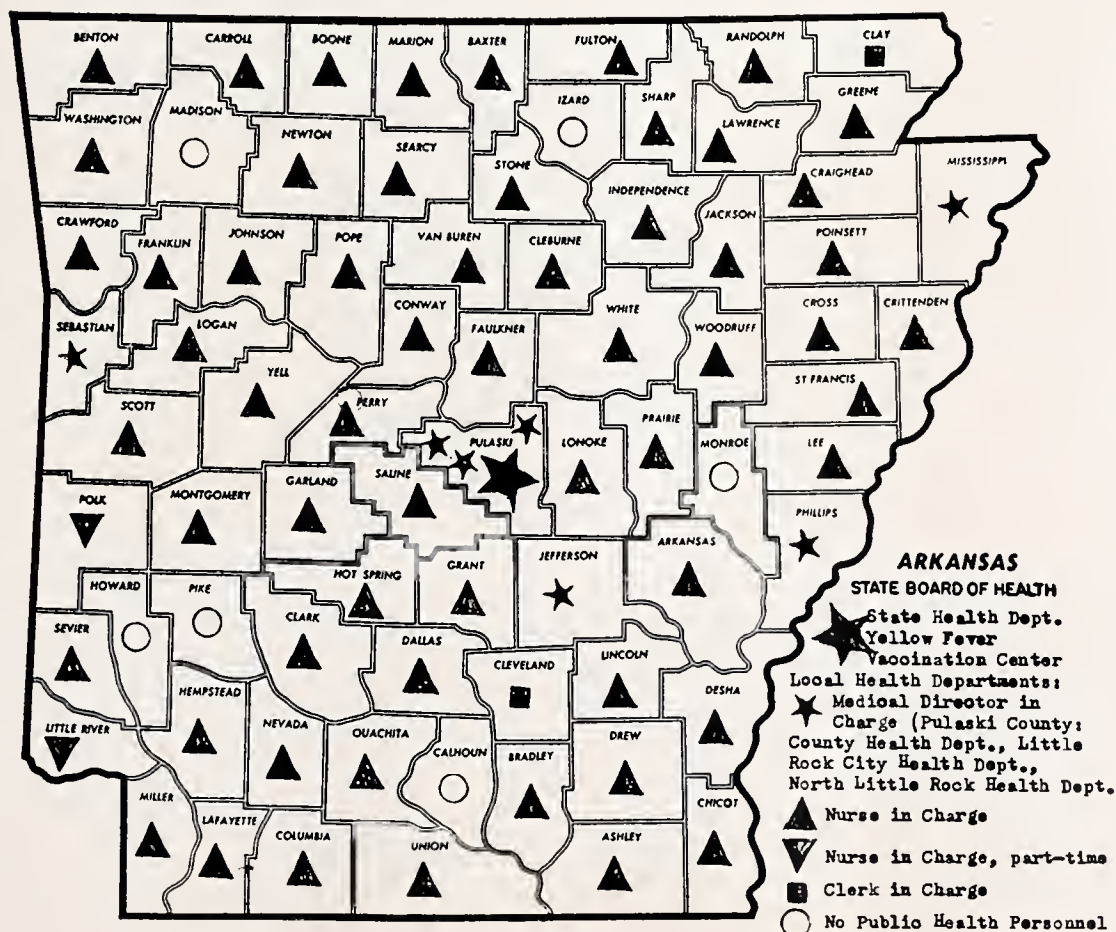


PUBLIC HEALTH AT A GLANCE

IMMUNIZATIONS FOR INTERNATIONAL TRAVEL

International travel has imposed the necessity for various immunizations upon many Arkansans who, in turn, seek assistance from their physicians. In order to expedite travel arrangements not only to satisfy the requirements of foreign countries but also to assure that our friends and relatives may avoid acquiring preventable contagious diseases known to exist at a higher incidence in other countries, the physicians of Arkansas will be called upon more and more for immunizations.

Arkansas physicians are becoming increasingly familiar with the "International Certificates of Vaccination", which is the official document for international travel and requires affixing an approved stamp certifying that the physician is a bona fide practitioner in the city, county, or state for which the stamp has been prepared. Each local health department, as well as the State Health Department, has an official stamp for certification of these certificates. In order to further assist



the physicians of Arkansas, the Arkansas State Board of Health furnishes each local health department a copy of the latest edition of the booklet "Immunization Information for International Travel" with subsequent pertinent revisions at weekly intervals.

Yellow fever vaccination requests have been increasing steadily since the Arkansas State Board of Health was approved as a Designated Yellow Fever Vaccination Center in January, 1957. Forty-one states, Puerto Rico, American Samoa, Washington, D. C., and the Canal Zone have Designated Yellow Fever Vaccination Centers which are listed in the booklet "Immunization Information for International Travel", with the complete address and telephone number as well as the clinic hours and whether or not there is a fee. Strict control is mandatory since the yellow fever vaccine is highly thermolabile and must be transported at sub-freezing temperatures as well as stored at sub-freezing temperatures. This live virus vaccine must be used promptly upon thawing and may not be refrozen. No other immunizations are given at the State office although certification of other immunizations may be done if not already certified by the local health department. Not only does

the local health department certify vaccinations given by the physicians practicing in its locality, but also where approved by the local Medical Society certain routine immunizations may be given.

Sanitary rules for international traffic and travel are standardized through an agreement between governments known as the International Sanitary Regulations of the World Health Organization. Travelers who fail to follow such rules are apt to run into serious difficulties and delays. Each applicant for foreign travel is advised by the Department of State as to required immunizations when the application for passport is made. Additional recommendations of the Division of Foreign Quarantine are for the individual traveler's safeguard.

The Arkansas medical profession has the co-operation of the local wholesale drug companies in supplying vaccine against cholera, epidemic typhus fever, and plague, in addition to the routine immunizing preparations.

Arkansas State Board of
Health
Division of Communi-
cable Disease Control



EDITORIAL

THE PHYSICIAN "IMAGE"

C. Lewis Hyatt, M.D.

THESE DAYS IT HAS become very popular to speak of the "image" of various things such as individuals, groups, and places. I'm not sure I know exactly what is meant when one speaks or writes of the image of the individual physician, or of the A.M.A., or of say the State of Arkansas. But it probably means just what you would expect — the generally accepted mental picture of the designated individual, group or place.

At any rate, the physician image of today is not as good as it ought to be—nor is it as good as it used to be.

This is a strange paradox because we can give our patients infinitely better, more efficient and more prompt medical care than ever before in the history of the world.

So I'm not sure I know just why we have lost stature in the eyes of our patients and of the public. I do know some of the reasons.

A few decades ago the term doctor or physician implied the family physician to nearly everyone. In those days the physician had relatively so much less to give in a scientific way that he necessarily gave more of himself in kindness and consideration and helpfulness. A large part of what he did was accomplished through confidence and faith — suggestion and rapport for the more modern student who may not know the extent to which confidence and faith aids healing. We are tending to become highly skilled technicians instead of warm, human, professional people. We could overcome this defect if we would give it the thought and effort it deserves.

Another cause of our loss of public esteem is a direct result of the thoughtlessness or selfishness of some specialist groups within our profession. One group in particular has constantly enlivened and fed a sensational lay press over the past twelve to fifteen years with large headlines blazoned across the whole nation of unwarranted charges amounting to criminal accusation. What could cause a loss of confidence in medicine more quickly or more surely than a learned, skilled specialist telling the press that almost every doctor who does not belong to his small group is incompetent and practices highly unethical procedures? And now that group states that its members are forbidden to give any instruction to a physician outside of his specialty group. No better ammunition could be given critics of the medical profession. No amount of organized public relations effort can counteract the effect of this intraprofessional bickering. This cause of our loss of stature could and should and must be corrected within our profession if we are to regain our image in the mind of the public.

One other important reason for our loss of professional prestige is the definite decrease in our dedication to organized medicine. I know there has been a great increase in the number of recreational, social, political, community and religious phases of our busy lives. These are largely good and I am pleased that physicians take such active parts. But twenty-five or more years ago the average physician was much more dedicated to organized medicine than he is today. I have

watched the same small group of faithful physicians wrestling time after time with problems concerning the entire medical profession. They were away from their family, foregoing some much needed recreation and often incurring the displeasure of some of their colleagues because they dared to try to solve some knotty problems. I have heard some of these same dedicated physicians referred to in a derogatory manner as a member of a small clique who runs the Arkansas Medical Society or the A.M.A. by one who almost never goes to any medical meeting. Brother, if you are not going to express your opinion and discuss and help to arrive at good solutions to the serious problems that confront us today, don't knock the ones who are trying. They are not doing

it for power or influence but because they feel it is necessary for someone to do the job for us.

Organized medicine speaks for us. If you can't speak with and for it, don't speak against it. If every physician would participate in medical affairs and give just a little of his time and effort and means, how much stronger would be the influence of our profession in public and private life today. This is another factor in our loss of image which could and should be corrected.

There are, of course, other reasons which have affected our public relations or our public image. However, these are among the more important, and they are all reasons which could be corrected if we in the profession are of a mind to do it.

P R O G R A M

EIGHTY-FIRST ANNUAL SESSION

ARKANSAS MEDICAL SOCIETY

ARLINGTON HOTEL, HOT SPRINGS, ARKANSAS

APRIL 29, 30—MAY 1, 2, 1962

A N N O U N C E M E N T S

REGISTRATION

The registration desk will be located on the mezzanine floor of the Arlington Hotel and will be open from 11:00 a.m. to 5:00 p.m. on Sunday, April 29th, from 9:00 a.m. to 5:00 p.m. Monday and Tuesday, and from 9:00 a.m. to noon on Wednesday.

Delegates are requested to register as early as possible, presenting credentials in proper form at the time of registration. Members and visitors are required to register, as admission to all sessions will be by badge. Bring your 1962 membership card to facilitate registration. Members of the American Medical Association from other states may register as guests.

Special telephone service will be maintained at the registration desk—phone number National 4-4122.

MEETINGS OF THE COUNCIL

The Council of the Arkansas Medical Society, including past presidents, will meet as follows:

Sunday afternoon, April 29th, 2:00 p.m., Montague Room, Arlington Hotel

Monday, April 30th, 12:00 noon, Montague Room, Arlington Hotel

Tuesday, May 1st, 12:00 noon, Montague Room, Arlington Hotel

Wednesday, May 2nd, 9:00 a.m., Montague Room, Arlington Hotel

REFERENCE COMMITTEE HEARINGS

Reference Committees appointed by the Speaker of the House of Delegates will hold open hearings to discuss resolutions and committee reports referred to them as follows:

Committee Number One—Will meet Monday afternoon, April 30th, from 2:00 to 4:00 p.m. in the Fountain Room of the Arlington Hotel.

H. W. Thomas, Dermott, Chairman; C. C. Long, Ozark; Joseph Buchman, Little Rock.

Committee Number Two—Will meet Monday morning, April 30th, at 9:00 a.m. in Cafe 2 of the Arlington Hotel.

C. R. Ellis, Malvern, Chairman; James M. Kolb, Clarksville; James W. Headstream, Little Rock.

ELECTION TO FILL VACANCY ON THE ARKANSAS STATE MEDICAL BOARD

A vacancy occurs in the Fifth Congressional District, the counties of which are listed below. All members from these counties are eligible to attend the meeting and vote for nominees. Please meet in Fountain Room of the Arlington Hotel

immediately following the House of Delegates meeting on Sunday, April 29th. Counties of the Fifth Congressional District are: Conway, Faulkner, Perry, Pope, Pulaski and Yell.

PRESENT MEMBER: William A. Snodgrass, Jr., Little Rock, who is eligible for reappointment.

ELECTION TO FILL VACANCY ON THE ARKANSAS STATE BOARD OF HEALTH

A vacancy occurs in the Second Congressional District, the counties of which are listed below. All members from these counties are eligible to attend the meeting and vote for nominees. Please meet in Fountain Room of the Arlington Hotel immediately following the House of Delegates meeting on Sunday, April 29th. Counties of the Second Congressional District are: Cleburne, Fulton, Independence, Izard, Jackson, Lawrence, Monroe, Prairie, Randolph, Sharp, Stone, White and Woodruff.

PRESENT MEMBER: Dr. Ed D. McKnight, Brinkley, who is eligible for reappointment.

DERMATOLOGY SECTION

The Arkansas Dermatological Society will meet on Sunday April 29th at Medicine Clinic, University of Arkansas Medical Center in Little Rock.

Program:

- 9:00 a.m. Presentation of Clinical Cases
- 11:00 a.m. Discussion of presentations
- 12:30 Luncheon—Coachman's Inn
Speaker, Dr. Ed Cawley—"Angioid Streaks"

PAST PRESIDENTS' BREAKFAST

The past presidents' breakfast will be held in Cafe 2 of the Arlington Hotel at 7:30 a.m. on Wednesday, May 2nd.

FIFTY YEAR CLUB BREAKFAST

A breakfast for members of the Fifty Year Club of the Arkansas Medical Society will be held in the Montague Room of the Arlington Hotel at 7:30 a.m. on Tuesday, May 1st. Members are requested to contact Dr. J. H. McCurry, Fifty Year Club Secretary, at the Arlington Hotel before 7:00 p.m. on Monday.

SCIENTIFIC EXHIBITS

Scientific exhibits have been arranged in the mezzanine area near the entrance to the Ballroom. You will be interested in seeing these displays by Arkansas and out-of-state physicians.

COMMERCIAL EXHIBITS

The commercial exhibits in the Ballroom display the products and services of well-known and reputable firms. Their presence here represents an important financial contribution to our annual session. You are urged to visit each booth and register with the representatives in attendance.

GOLF TOURNAMENT

The Annual Golf Tournament will be played at the Hot Springs Golf and Country Club on Sunday, Monday, and Tuesday, April 29, 30 and May 1. Register with club pro at Pro Shop. The first three prizes will be announced at the annual banquet Tuesday evening. Gaston Hebert and Thomas Burrow are the members of the Golf Tournament Committee.

CANCER SEMINAR

The Arkansas Association of Tumor Clinic Staff Members will present a Cancer Seminar on Sunday, April 29th, beginning at 2:00 p.m. in the Velda Rose Motel. The subject for the seminar will be "Leukemias and Lymphomas". Guest speakers will be Steven G. Economou of the University of Illinois School of Medicine, Chicago, and Bernard Jaslowitz of New York City. All members of the Society are invited to attend.

HOUSE OF DELEGATES

Sunday, April 29th, 1962, 4:30 p.m.

Fountain Room, Arlington Hotel

The first session of the House of Delegates will convene at 4:30 p.m. in the Fountain Room of the Arlington on Sunday, April 29th. The order of business will be as follows:

- Call to Order
- Roll Call of Delegates
- Report of Credentials Committee
- Introduction of Guests
- Adoption of minutes of 85th Annual Session
- Report of the Council
- Report of Committees
- New Business
- Selection of Nominating Committee
- Adjournment

FIRST GENERAL SESSION

Monday, April 30th, 1962, 9:00 a.m.

Crystal Ballroom, Arlington Hotel

9:00 a.m. FILM: "Ten Years After Hiroshima"
VISIT EXHIBITS

SCIENTIFIC SESSION

CHARLES W. REID, Pine Bluff, Second Vice President, presiding

- 9:30 a.m. "The Management of Neck Masses", Steven G. Economou, University of Illinois School of Medicine, Chicago, Illinois
- 10:00 a.m. "Systemic Components of Cutaneous Disease", Edward P. Cawley, Department of Dermatology, University of Virginia Hospital, Charlottesville, Virginia
- 10:30 a.m. INTERMISSION—VISIT EXHIBITS
- 11:00 a.m. "Contact Lens, Pro and Con", Joseph Dixon, Birmingham, Alabama
- 11:30 a.m. Invocation—Very Reverend Monsignor Joseph M. Burns
President's Address, William A. Snodgrass, Jr., Little Rock

Theragran[®]

SQUIBB VITAMINS FOR THERAPY

For your patients with infections or other illnesses who need therapeutic vitamin support. Each Theragran supplies the essential vitamins in truly therapeutic amounts:

| | |
|------------------------------------|---------------------|
| Vitamin A | 25,000 U.S.P. Units |
| Vitamin D | 1,000 U.S.P. Units |
| Thiamine Mononitrate | 10 mg. |
| Riboflavin | 10 mg. |
| Niacinamide | 100 mg. |
| Vitamin C | 200 mg. |
| Pyridoxine Hydrochloride | 5 mg. |
| Calcium Pantothenate | 20 mg. |
| Vitamin B ₁₂ | 5 mcg. |

SQUIBB



Squibb Quality—the Priceless Ingredient

'Theragran'® is a Squibb trademark

“nutrition...present as a modifying or complicating factor in nearly every illness or disease state”¹

1. Youmans, J. B.: Am. J. Med. 25:659 (Nov.) 1958

cardiac diseases “Who can say, for example, whether the patient chronically ill with myocardial failure may not have a poorer myocardium because of a moderate deficiency in the vitamin B-complex? Something is known of the relationship of vitamin C to the intercellular ground substance and repair of tissues. One may speculate upon the effects of a deficiency of this vitamin, short of scurvy, upon the tissues in chronic disease.”²

2. Kampmeier, R. H.: Am. J. Med. 25:662 (Nov.) 1958.

arthritis “It is our practice to prescribe a multiple vitamin preparation to patients with rheumatoid arthritis simply to insure nutritional adequacy . . .”³

3. Fernandez-Herlihy, L.: Lahey Clinic Bull. 11:12 (July-Sept.) 1958.

digestive diseases Symptoms attributable to B-vitamin deficiency are commonly observed in patients on peptic ulcer diets.⁴ Daily administration of therapeutic vitamins to patients with hepatitis and cirrhosis is recommended by the National Research Council.⁵

4. Sebrell, W. H.: Am. J. Med. 25:673 (Nov.) 1958. 5. Pollack, H., and Halpern, S. L.: Therapeutic Nutrition, National Academy of Sciences and National Research Council, Washington, D. C., 1952, p. 57.

degenerative diseases “Studies by Wexberg, Jolliffe and others have indicated that many of the symptoms attributed in the past to senility or to cerebral arteriosclerosis seem to respond with remarkable speed to the administration of vitamins, particularly niacin and ascorbic acid. These facts indicate that the vitamin reserve of aging persons is lowered, even to the danger point, more than is the case in the average American adult.”⁶

6. Overholser, W., and Fong, T. C. C. in Stieglitz, E. J.: Geriatric Medicine, 3rd edition, J. B. Lippincott, Philadelphia, 1954, p. 264.

infectious diseases Infections cause a lowering of ascorbic acid levels in the plasma; and the absorption of this vitamin is reduced in diarrheal states.⁷

7. Goldsmith, G. A.: Conference on Vitamin C. The New York Academy of Sciences, New York City, Oct. 7 and 8, 1960. Reported in: Medical Science 8:772 (Dec.10) 1960.

diabetes Diabetics, like all patients on restricted diets, require an extra source of vitamins.⁸ “Rigidly limiting the bread intake of the diabetic patient automatically eliminates a large amount of thiamin from the diet. . . . There is some evidence of interference with normal riboflavin utilization during catabolic episodes.”⁹

8. Duncan G. G.: Diseases of Metabolism 4th edition W. B. Saunders, Philadelphia, 1959, p. 812. 9. Pollack, H.: Am. J. Med. 25:708 (Nov.) 1958.

FOR FULL INFORMATION SEE YOUR SQUIBB PRODUCT REFERENCE OR PRODUCT BRIEF.

SECOND GENERAL SESSION

Monday, April 30th, 1962, 2:00 p.m.

Crystal Ballroom, Arlington Hotel

M. E. BLANTON, Jonesboro, First Vice President, presiding

- 2:00 p.m. "General Principles in the Diagnosis and Treatment of Patients With Malignant Lymphomas," Bernard W. Jaslowitz, New York, N.Y.
- 2:30 p.m. "Pyelonephritis", J. W. Schlegel, Department of Urology, Tulane University School of Medicine, New Orleans, Louisiana
- 3:00 p.m. INTERMISSION—VISIT EXHIBITS
- 3:20 p.m. "Advances in Anesthesiology", Vincent Collins, Department of Anesthesiology, Cook County Hospital, Chicago, Illinois
- 3:50 p.m. "Non Infectious Lesions of the Respiratory Tract in Infants and Children", Harvey White, Chicago, Illinois

Monday Evening, April 30th, 1962

COCKTAIL PARTY
(Swimming Pool)

6:00-7:30 p.m.

Hors d'oeuvres

Organist

FINAL GENERAL SESSION

Tuesday, May 1, 1962

9:00 a.m.

Crystal Ballroom, Arlington Hotel

L. E. DREWREY, Camden, Third Vice President, presiding

- 9:00 a.m. FILM: "Treatment of Thoracic Injuries"
- 9:30 a.m. "Medical Aspects of Therapy of Complete Heart Block and Cardiac Arrest", Edward Massie, Barnes Hospital, St. Louis, Missouri
- 10:00 a.m. "Obstetric Shock", Roy T. Parker, Associate Professor, Department of Obstetrics and Gynecology, Duke University School of Medicine, Durham, North Carolina
- 10:30 a.m. INTERMISSION—VISIT EXHIBITS
- 11:00 a.m. "Stress and Coronary Artery Disease", James F. Hammersten, Professor of Medicine, University of Oklahoma, Oklahoma City, Oklahoma
- 11:30 a.m. MEMORIAL SERVICE

Crystal Ballroom, Arlington Hotel

WM. A. SNODGRASS, JR., President, Presiding

Invocation: John Wm. Smith, Little Rock

Reading of the names of the deceased members of the Auxiliary by
Mrs. T. Duel Brown, Chaplain

Reading of the names of the deceased members of the Society, Dr. Snodgrass

Memorial Address: Walter H. O'Neal, Little Rock

Music by Harold Hawley, North Little Rock

Benediction: Dr. Smith

Tuesday, May 1, 1962

SPECIALTY SECTION MEETINGS

(There is no General Session Scheduled for Tuesday Afternoon)

EYE, EAR, NOSE AND THROAT

The E.E.N.T. Section will meet in the Fountain Room of the Arlington Hotel, beginning at 9:00 a.m. on Tuesday, May 1. There will be a morning scientific session, followed by a luncheon and business meeting. The afternoon scientific session will begin at 1:00 p.m. and continue until 4:00 p.m. Joseph Dixon, of Birmingham, Alabama, will present a paper on "Corneal Trauma, Vascularization, Bacteria, and Virus Infection Due to Corneal Lenses".

PEDIATRICS

The Pediatric Section will meet with the General Practice Section for luncheon and a scientific session in the Velda Rose Motel, beginning at 12:30 p.m.

UROLOGY

The Urology Section will meet for luncheon in the Presidential Suite of the Velda Rose Motel. Following the luncheon, there will be a scientific session with Dr. J. U. Schlegel as guest speaker and a business meeting. Dr. Schlegel will discuss "The Therapeutic Application of Renal Physiology".

GENERAL PRACTICE

The Arkansas Academy of General Practice will hold a luncheon in the Velda Rose Motel, beginning at 12:30 p.m. There will be a scientific session with Dr. Harry G. Shirkey of Birmingham, Alabama, as guest speaker, and panel discussions by members of the staff of the University of Arkansas School of Medicine. Dr. Shirkey's first talk on "Respiratory Infections in Children: Office and Out-Patient Evaluation, Treatment" will be discussed by Wm. T. Knicker and Alice G. Beard. A second paper on "Diagnosis by Inspection" will be discussed by F. Stanley Porter and Delbert A. Fisher. This meeting will be acceptable for two hours credit, Category I.

INTERNAL MEDICINE

- 12:15 p.m. Luncheon and Business Meeting, Arkansas Society of Internal Medicine, Main Dining Room, Arlington Hotel
- 2:00 p.m. Internal Medicine Section Meeting (All Physicians invited), Grand Ballroom, Arlington Hotel, Daniel Autry, presiding
- 2:00 p.m. "Important Factors in the Prevention of Coronary Disease", Edward Massie, University of Illinois School of Medicine, Chicago
- 2:45 p.m. Intermission

3:00 p.m. "Sarcoidosis: Clinical, Epidemiological and Laboratory Aspects",
James F. Hammersten, University of Oklahoma School of Medicine,
Oklahoma City

RADIOLOGY

The Radiology Section will meet for luncheon in the Arlington Hotel, Cafe 2, beginning at 12:00 noon. There will be a business meeting at 1:00 p.m., followed by the presentation of a paper on "Congenital Abnormalities of the Esophagus in Infants and Children with Cine Roentgenographic Studies" by Dr. Harvey White of Chicago. There will be a discussion period moderated by Dr. Howard Barnhard and a film reading session moderated by Dr. White.

OBSTETRICS AND GYNECOLOGY

The Section on Obstetrics and Gynecology will meet for luncheon in the Banquet Room, Arlington Hotel, beginning at 12:30 p.m. Following the luncheon, Dr. Roy T. Parker of Durham, North Carolina, will present a paper on "Chemotherapy in Genital Cancer". Dr. Willis E. Brown, Dr. Melvin McCaskill and Dr. Deane D. Wallace, all of Little Rock, will participate in a panel discussion on "Current Problems in Obstetrics and Gynecology." There will be a brief business meeting.

ANESTHESIOLOGY

The Section on Anesthesiology will meet for a scientific session in the Parlor, Arlington Hotel, beginning at 2:00 p.m. Dr. Vincent Collins of New York will talk on "Management of Patients with Cardiac Disease".

SURGERY

Time and place to be announced.

TUESDAY EVENING

May 1, 1962

ANNUAL BANQUET AND INSTALLATION

7:00 p.m., Arlington Hotel

WILLIAM A. SNODGRASS, JR., Society President, presiding

Music by Hotel Orchestra

Speaker: Mr. Roger Fleming, Secretary Treasurer, America Farm Bureau
Federation, Washington, D.C.

Announcement of Golf Awards

Installation of New President, H. King Wade, Jr., Hot Springs

FINAL SESSION, HOUSE OF DELEGATES

Wednesday, May 2, 1962

10:00 a.m.

Crystal Ballroom, Arlington Hotel

Roll Call

Report of Nominating Committee

Election of Officers:

President-elect
First Vice President
Second Vice President
Third Vice President
Treasurer
Secretary
Speaker of the House of Delegates
Vice Speaker of the House of Delegates
Councilors (one from each of the ten districts)

(Councilors whose terms expire are:

1. Joe Verser
2. Hugh R. Edwards
3. K. E. Beaton
4. H. W. Thomas
5. J. L. Dedman
6. John P. Wood
7. Martin Eisele
8. Robert D. Jones
9. Ross Fowler
10. L. A. Whittaker

Delegate to the American Medical Association House of Delegates
(term of Dr. James M. Kolb, eligible for re-election, expires December 31, 1962)

Alternate Delegate to the American Medical Association House of Delegates
(term of Dr. C. C. Long, eligible for re-election, expires December 31, 1962)

Delegate to the American Medical Association House of Delegates
(unexpired term of Dr. Fount Richardson, deceased. Term ending December 31, 1963)

Report of Reference Committees

Supplementary Report of the Council

Report of Committees

New Business

Selection of Time and Place of 1964 Meeting

Adjournment

COUNCIL MEETING

The new Council will convene for a brief reorganizational meeting immediately following adjournment of the Final Session of the House of Delegates.

COMMERCIAL EXHIBITORS

The business firms who purchase exhibit space at our annual session contribute a great deal to the financing as well as to the educational aspects of the meeting. The number of visits to the commercial exhibits are the only criteria by which these companies can judge the value they receive from the investment in booth rental, displays and employee's time. You will be rewarded for the time you spend visiting the following exhibits.

COMMERCIAL EXHIBITORS

MEAD JOHNSON AND COMPANY

The Mead Johnson Laboratories' exhibit has been arranged to give you the optimum in quick service and product information. To make your visit productive, specially trained representatives will be on duty to tell you about their products.

HERBERT COX CORRECT SHOES

Footwear needs of doctors' patients extend from orthopedics and pediatrics into obstetrics, surgery, geriatrics, internal medicine with manifold ramifications. Herbert Cox Shoes, Little Rock, has an outstanding record for shoe service in therapy as well as prophylaxis. The exhibit permits discussion of medical contingencies with a senior staff member of the Herbert Cox Shoe Company.

ABBOTT LABORATORIES

Abbott Laboratories invites you to visit our exhibit. Our representatives will be happy to answer any questions you may have concerning our leading products and new developments.

GEIGY PHARMACEUTICALS

Geigy cordially invites members and guests of the Society to visit its exhibit. The exhibit features important new therapeutic developments in the management of inflammation, as well as current concepts in the control of hypertension and edema; depression; obesity; and other disorders, which may be discussed with physicians and representatives in attendance.

STUART COMPANY

A cordial invitation is extended to all members and guests attending this meeting to visit the Stuart Company booth. Specially trained representatives will be in attendance to answer your questions on new products developed in our new and modern laboratories which have received international acclaim.

ROCHE LABORATORIES

The following two products will be featured in the Roche booth: LIBRIUM, a therapeutic agent for superior, safer, faster control of nervousness, anxiety, tension and other common emotional disturbances without the dulling effect or depressant action of the tranquilizers; LIBRAX, a formulation of Librium and Quarzan for the control of gastrointestinal disorders and associated emotional symptoms. A convenience single-capsule formulation of Librium, specific for all degrees of anxiety and tension, and Quarzan, the new highly effective Roche anticholinergic.

WARNER-CHILCOTT LABORATORIES

The Warner-Chilcott booth will feature the following products. Gelusil, the physician's antacid — for the relief of gastric hyperacidity and management of peptic ulcer. Provides two protective coating gels for prompt, prolonged relief of pain. Gelusil is all antacid in action — is non-constipating, contains no laxative. Peritrate — a long-acting coronary vasodilator for patients with coronary artery disease — whether angina pectoris or coronary occlusion. Peritrate improves coronary blood flow, thereby increasing collateral circulation, with no significant change in blood pressure or pulse rate. Smooth onset of action virtually eliminates nitrate headache.

SANDOZ PHARMACEUTICALS

Sandoz Pharmaceuticals cordially invites you to visit our display at Booth No. 10 where we are featuring Mellaril,

Torecan. Any of our representatives in attendance will gladly answer questions about these and other Sandoz products.

J. A. MAJORS COMPANY

The latest publications of the W. B. Saunders Company will be on display for your examination: 1962 Current Therapy; Williams — ENDOCRINOLOGY (new third edition); Hogan and Zimmerman — ATLAS OF OPHTHALMIC PATHOLOGY; Reid — TEXTBOOK OF OBSTETRICS; Lore — ATLAS OF HEAD AND NECK SURGERY.

FIRST TEXAS PHARMACEUTICALS, INC.

First Texas Pharmaceuticals, Inc., will display several specialties of interest to the busy physician. The personnel in charge are well equipped to answer any question regarding the products on display. Your visit to our booth will be sincerely appreciated.

G. D. SEARLE AND COMPANY

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research.

DABBS-SULLIVAN COMPANY, INC.-Investment Securities

Mr. Melvin Spear, Account Executive with Dabbs Sullivan Company, Inc., will exhibit pamphlets and brochures regarding investment securities. Included in his exhibits are Mutual Fund Prospectus and associated literature. Mr. Spear is available to answer any of your questions.

RATHER AND BEYER

Rather and Beyer Agents, who are administrators of our group plans of disability insurance and professional overhead expense insurance, which are officially endorsed by AMS, will have complete literature regarding these plans at their booth. Gordon S. Rather and James R. Harper, partners of Rather and Beyer, will be in attendance and will be glad to answer any questions regarding the coverage which you may have. They invite you to visit their booth.

THE COCA-COLA COMPANY

Ice-cold Coca-Cola served through the courtesy and co-operation of the Coca-Cola Bottling Company of Hot Springs, and the Coca-Cola Company.

E. R. SQUIBB AND SONS

E. R. Squibb and Sons has long been a leader in development of new therapeutic agents for prevention and treatment of disease. The results of our diligent research are available to the medical profession in new products or improvements in products already marketed. At Booth No. 17, we are pleased to present up-to-date information on these advances for your consideration.

WM. T. STOVER COMPANY

The Wm. T. Stover Company, celebrating its 22nd year of operation in the surgical business in Arkansas, in the same location for 15 years, will be extremely happy to visit with you at your annual meeting. There will be many new items, too numerous to list, on display from our Surgical X-Ray and Laboratory Departments, as well as many old items, such as Bill Stover, Massie, Fetzek, Love, Robertson, Boedeker, Deglow, Holmes, Solinger, and Rose. And

we mean "old"!!! Their experience in their specialty trades totals 217 years.

PLOUGH LABORATORIES, INC.

The Plough Laboratories display includes two demonstrations of the unique pharmacological activity of SILAIN, a gastrointestinal defrothant. In vitro—SILAIN breaking the foam which holds much gas—aids in its elimination. In vivo—gastrosopic photographs show SILAIN'S effect on foam in the stomach.

PARKE, DAVIS AND COMPANY

Medical service members of our staff will be in attendance at our booth to discuss important Parke-Davis specialties which will be on display.

A. H. ROBINS COMPANY, INC.

Heard any digestive complaints lately? Check at the Robins display on the natural supplement for digestive enzymes, ENTOZYME, and the time-tested sedative-antispasmodic, DONNATAL. For "nervous indigestion" these widely accepted products are combined in DONNAZYME. Also featured: DIMETANE EXTENTABS for unsurpassed, 10-to-12 hour antihistaminic potency with placebo-like side effects; and new ROBANUL, the "rigid ring" anticholinergic for duodenal ulcer.

CIBA PHARMACEUTICAL COMPANY

SER-AP-ES is a combination of 3 antihypertensive agents from CIBA research—SERPASIL, APRESOLINE, and ESI-DRIX—in a single tablet. SER-AP-ES lowers blood pressure uniformly, consistently and safely, while it controls such hypertensive complications as anxiety, impaired renal circulation and edema. With SER-AP-ES, moderate to severe hypertension can be treated effectively, with greater convenience, and at a lower cost to the patient.

MERCK, SHARP AND DOHME

The theme of the Merck, Sharp and Dohme exhibit is

"SERVICE TO MEDICINE." One phase features the details of the Merck, Sharp and Dohme Postgraduate Program. Another feature includes information on teaching films for use by the profession, and also, lay films that can be utilized to portray the story of medicine to the lay public. The exhibit is concluded with a display of fingertip files on selected Merck, Sharp and Dohme products.

ELI LILLY AND COMPANY

You are cordially invited to visit the Lilly exhibit located in space No. 26. The Lilly sales people in attendance welcome your questions about Lilly products and recent therapeutic developments.

ARKANSAS X-RAY & SURGICAL, INC.

The new ELECTRA 100 MA at 100 PKV X-RAY UNIT, complete with rotating anode tube, automatic push button control mounted on a lead screen, electric drive tube stand that can be installed in a minimal space and costly ceiling mounting eliminated. DIAPULSE, the pulsed high frequency approach through stimulation of the host defence mechanism will be demonstrated. RITTER UNIVERSAL TABLES, outstanding features will be shown, along with the NO. 8 EXAMINING LIGHT, 999 AUTOCLAVE and the OFFICE BOVIE.

PFIZER LABORATORIES

Professional Service Representatives from Pfizer Laboratories will be pleased to have you in attendance at their booth to discuss the latest products of Pfizer research.

SOUTHWESTERN BELL TELEPHONE CO.

The telephone company will again display such things as artificial larynx, voice amplifier, aid for hearing, princess telephone, recorder answering service, and other modern equipment to be used in the doctors offices.

DICK X-RAY COMPANY

KAY SURGICAL COMPANY, INC.

ARKANSAS MEDICAL AND HOSPITAL SERVICE, INC.

Annual Committee Reports

COMMITTEE ON CANCER CONTROL

Jean C. Gladden, Chairman

The Committee on Cancer Control of the Arkansas Medical Society met on one occasion during the past year at which time it approved the showing of the American Cancer Society film entitled "Life Story". The film deals with cancer of the colon and rectum and it is for lay education. The film will be shown extensively throughout the United States by the American Cancer Society this year.

Most of the members of the Cancer Control Committee are also members of the Board of Directors of the Arkansas Division of the American Cancer Society. These members have regularly attended the Board Meetings of the Arkansas Division during the past year and participated in the activities of the Arkansas Division of the American Cancer Society.

COMMITTEE ON RURAL HEALTH

Ben N. Saltzman, Chairman

Your chairman has been honored by being given a seat on the Rural Community Improvement Board of Directors. This year, the Arkansas Medical Society through its Committee on Rural Health is sponsoring four health projects for competition among the rural communities of the State of Arkansas. Over fifty communities are competing in most of these projects. The projects are (1) Physical and Dental Examinations, (2) Sanitation, (3) Immunizations and (4) Rodent Control. It is my understanding that many more communities have shown interest in this competition and should be entries by early spring. It is the feeling of the Committee on Rural Health that this is a more successful way to make rural people aware of health problems and their solution. The fact that the Medical Society will donate plaques to winners in three divisions should be evidence of the interest of the physicians of the state in rural health problems. Your chairman continues to be a member of the Council on Rural Health of the American Medical Association and is thus in a position to bring the latest thinking of the A.M.A. to this committee of the State Medical Society.

COMMITTEE ON INDUSTRIAL HEALTH

Jahn G. Watkins, Chairman

The Committee on Industrial Health reports no activity during the year.

SUB-COMMITTEE ON TUBERCULOSIS

Stanford C. Manrae, Chairman

The Sub-Committee on Tuberculosis met on December 3, 1961 at McRae Sanatorium as guests of Committee member, Dr. Hugh A. Browne. Those in attendance were Chairman, Dr. Stanford C. Monroe, Members, Dr. Hugh A. Browne and Dr. Harley C. Darnell. Absent were Dr. David P. Hefner, Dr. M. L. Godley, and Dr. Richard V. Ebert.

The agenda for the meeting as follows:

1. Review of treatment and hospital program of the Tuberculosis Sanatoriums.
2. Review of tuberculin skin testing program in the schools.
3. Review of mobile chest x-ray program.
4. Discussion of home treatment program.

The Committee had as its guest at this meeting Dr. Jones, the Medical Director at Booneville Sanatorium and Dr. Reagan,

Chief of the Tuberculosis Control Branch of the Arkansas State Health Department. Dr. Jones and Dr. Reagan contributed greatly to the discussions and their advice and counseling were a great help to the work of the Committee.

The following recommendations are made with unanimous approval of the Committee:

1. The Sub-Committee on Tuberculosis should include as ex-officio members the medical directors of the State Tuberculosis Sanatoriums and the director of Tuberculosis Control of the State Health Department.
2. The State Medical Society give its full support toward obtaining additional full time, competent, medical personnel at each of the sanatoriums.
3. That a review be made by the Legislative Committee of the Arkansas Medical Society in regard to the law relating to the so-called recalcitrant patient to insure that the hospital admission under this law constitutes a tuberculosis problem, rather than a means of disposing of alcoholics or other problem individuals.
4. That patients sent to the Sanatoriums for admission should always be referred and admitted through the usual accepted channels.
5. The practice of submitting routine x-ray films to the Sanatoriums for interpretation, such as those required for teachers, food handlers, pre-employment and pre-school examinations, should be discontinued. It is suggested that the problem of interpretation of these films be referred to the Radiological Society for their recommendations. It is further suggested that when x-ray films are submitted to the Sanatoriums a covering letter should always accompany the films.
6. It is recommended that the State Health Department take such necessary action to educate and encourage individuals to keep the number record of their mobile chest x-ray.
7. The continuation of the tuberculin skin testing program in the schools is recommended, but only in such localities after an intensive educational program to inform and educate all parents, teachers and the community of the significance of a positive or negative skin test.
8. It is recommended to the program committee on annual meetings that each program include a speaker on diseases of the chest and that funds necessary to secure such a speaker be solicited from the State Tuberculosis Association.
9. Encouragement of Chest Clinic programs is recommended with coordination of Chest Clinic activities, both professionally and administratively, through local and State Health Agencies and Societies.

SUB-COMMITTEE ON MENTAL HEALTH

W. Payton Kalb, Chairman

The primary problem in the field of Mental Health in this state continues to be that of a shortage of personnel in all fields working in this area. There is also a noticeable rise in requests from communities for Mental Health facilities which is being hampered by this lack of personnel. In the area of psychiatry the increase in residency training programs and residents is encouraging and these programs should have the backing and encouragement of all the doctors of the state.

No additional recommendations are being made this year in regard to the report of last year concerning the possibility of a central Mental Health authority for the

state of Arkansas. Some discussions have been held and are continuing to be held but there are no recommendations this year.

The most important development in the field of Mental Health, both for the state and the nation, this year was the issuance of the final report of the Joint Commission on Mental Illness and Health. This report should be read by every doctor in the state and is obtainable in the form of a book, "Action For Mental Health".

The Governor's Conference in Hawaii took special note of this and set up a special conference in Chicago on November 9-10 which was attended by your chairman.

There are a number of recommendations which should be carried out. There are some recommendations that are somewhat controversial and should be studied. One of the principal points involves the recommendation that expenditures for Mental Health should be doubled in the next five years and tripled in the next ten. The majority of the governors feel that this can be done only through federal participation. This should be studied very thoroughly and all of medicine should take a part in this.

The Arkansas Psychiatric Association with the American Psychiatric Association are working on the other recommendations.

SUB-COMMITTEE ON LIAISON WITH STATE BOARD OF HEALTH

Hugh R. Edwards, Chairman

There has been no activity of the Sub-Committee on Liaison with the State Board of Health during the past year.

POLIO ADVISORY SUB-COMMITTEE

B. P. Briggs, Chairman

The Polio Advisory Sub-Committee has had no meetings this year. No especial problems have occurred to warrant a meeting. It is anticipated, however, that in 1962 the Polio Advisory Sub-Committee will be active inasmuch as all three types of oral polio vaccine will be available. At that time measures will be instituted and advice given as to the recommendations for community inoculation using live polio vaccine. It has not been felt advisable to institute such procedures until all three types are available of the live polio vaccine.

COMMITTEE ON MEDICAL EDUCATION

C. C. Long, Chairman

The Committee on Medical Education met in Little Rock with the Dean of the Medical School and the President of the State Medical Society. At this meeting it was decided that the committee would make a survey. This survey was to be made in each county of the state to determine the number of towns that could attract and support a physician that were not adequately supplied at this time. Plans to implement this survey are under way now. It was felt by the committee that the survey would be valuable to the school, the State Medical Society and the state legislature in determining the future need of the state and means of providing for them.

In 1960, the Council and the House of Delegates approved the action of the Committee on Medical Education in establishing, under the auspices of the University of Arkansas, an educational program of Medical Assistants. This program has developed well and we are able to report that

the courses held in various towns all over the State are progressing to the benefit of all concerned.

Eighty-three girls have completed the six-weeks course in Medical Terminology in Magnolia, Texarkana, Fayetteville, Fort Smith and Little Rock. Courses in Anatomy and Physiology have been completed in Fayetteville and Texarkana, and have been started in Fort Smith. We understand that this course is also to be begun in Little Rock in the near future. Preliminary work is being done to set up the beginning course in Medical Terminology in Jonesboro.

It is emphasized that these courses are conducted within the standards of the University of Arkansas in the best academic traditions, and the Medical Assistants who take them are distinctly improved in their understanding of their work for physicians.

The committee will continue to encourage and support the establishment of courses in more towns in the State and the continuation of the advanced courses planned in those places where the program has been started.

SUB-COMMITTEE ON POSTGRADUATE EDUCATION

C. Lewis Hyatt, Chairman

The past year, 1961-62, has probably been the best year in the history of the Arkansas Medical Society so far as the postgraduate study available to its members is concerned.

The greater part of the effort to make this year so effective has been made by the Postgraduate Division of the University of Arkansas School of Medicine under Dr. John Riggin and by the Education Committee of the Arkansas Academy of General Practice under the chairmanship of Drs. A. R. Hammon and James Patrick. But these men have had good help from faculty members, committee members, pharmaceutical firms, Lippincott's Medical Science, and the various research-charitable organizations such as the Heart Association, Cancer Society, Tuberculosis Association, Trudeau Society and others.

An excellent scientific program was given this year at the annual session of the Arkansas Academy of General Practice, and an equally impressive program is planned for the coming annual session of the Arkansas Medical Society in Hot Springs.

Formal training has been readily available in the postgraduate sessions at the Medical Center in Little Rock, which presented a wide range of clinical subjects in seven one and two-day sessions. Also presented were special seminars in Cardiology and Ward Rounds and Demonstrations on an individual or small group basis.

The Arkansas Academy of General Practice has held formal short courses in the following cities over the State: Paragould, Warren, Fayetteville, Dumas, Batesville, Monticello, Camden and Fort Smith.

There have been numerous other excellent postgraduate meetings available to us such as the Ft. Roots' Neuro-Psychiatry Institute, the District Councilor and County or Regional meetings, various specialty group meetings, and hospital staff scientific meetings.

Recent discussions among members of this committee have been aimed at improving still the convenience of attending the study courses as to time, date, place and subject matter.

During the past year any physician in this State could have attended an informative refresher course on almost any clinical subject of his choosing with a minimum of effort and inconvenience. Attendance was in fact very good.

COMMITTEE ON HOSPITALS

Guy Shrigley, Chairman

This committee has had no matters presented during the past year which required formal action.

Your committee stands ready to serve and act in any matter coming under its jurisdiction.

SUB-COMMITTEE ON LIAISON WITH BLUE CROSS-BLUE SHIELD

A. S. Koenig, Chairman

Investigation of Arkansas Blue Cross-Blue Shield Program.

At the time of the annual session of the Arkansas Medical Society in April 1961, there was considerable discontent expressed by many members of the Society with the operation of the Arkansas Blue Cross-Blue Shield Plan and there was considerable sentiment at that time indicating that many of the doctors felt it would be advisable to separate Blue Cross and Blue Shield, each to be operated as an independent corporation. A hearing was held at the Albert Pike Hotel which was attended by members of the council and other interested physicians, the executive staff personnel and all of the members of the Board of Trustees of the Blue Cross-Blue Shield Plan. As a result of the meeting, at which time there was considerable discussion about many of the grievances which physicians had against the Plan, it was decided to conduct an investigation of the operation of the Plan, the investigation to be made by a management consultant firm to be agreed upon by the Executive Committee of the Arkansas Medical Society and the Executive Committee of the Board of Trustees of The Blue Cross-Blue Shield Plan.

This investigation was conducted during the summer of 1961 by the A. T. Kearney & Co. Management Consultants of Chicago, Illinois. Their report was rendered on September 19, 1961 and copies of their report were provided to the executive officers of the Arkansas Medical Society. Following the submission of their report, the Executive Committee of the Society met with representatives of the Board of Trustees and a representative from the A. T. Kearney & Co. to go over the recommendations of the Management Consultant Firm.

Briefly, the findings of the firm were favorable to the existing policies of the operation of the Arkansas Blue Cross-Blue Shield program. Certain recommendations were made in regard to exploration of extensions of benefits to subscribers and possible increased benefits to physicians under the existing and new contracts. A brief summary of the findings of A. T. Kearney & Co. was sent to all of the membership of the Arkansas Medical Society.

Senior Certificate.

In the Spring of 1961 the Arkansas Blue Cross-Blue Shield Plan prepared to issue the Comprehensive Senior Certificate which was developed through negotiation with the Arkansas Medical Society. The Certificate contained a provision for a co-insurance feature after the first \$250.00 of benefit which would make the payment of benefits difficult to administer. It would be impossible to make payments under this Certificate until all of the bills had been received by the Plan and proper pro-ration could be made between medical and hospital benefits. Because of the difficulty in administering the program, the Professional Committee recommended to the Board of Trustees that the certificate not be issued and another with similar

benefits be developed which would be easier to administer and provide for more prompt payment. The Council of the Arkansas Medical Society was so notified and agreed to the deferment on the issuance of the Comprehensive Senior Certificate.

In January of 1962 the American Medical Association and in conjunction with the National Association of Blue Shield Plans proposed the offering of a prepayment health insurance policy under national Blue Shield which, to all intents and purposes, was almost identical to the Comprehensive Senior Certificate which the Arkansas Plan had developed the preceding year. One of the principle features in the national program is the provision of service benefits for individuals in certain income categories. Early in February the American Medical Association urged all physicians in the United States to accept the service principle for the implementation of the over-65 health insurance contract. The Board of Trustees and the staff personnel of the Arkansas Plan are in the process of developing a Comprehensive Senior Certificate along the lines of the national program which will be shortly offered to the membership of the Arkansas Medical Society for their approval.

Expansion of Benefits.

The Professional Committee of the Board of Trustees will shortly be meeting with the Dermatologists to work out an equitable fee schedule for the removal of skin malignancies.

The Professional Committee has also been in negotiation with representatives of the Arkansas Dental Society for the provision of eligibility for members of the dental profession to participate in some of the surgical benefits and for oral surgery.

During the past year all of the pre-existing group and non-group Blue Cross and Blue Shield contracts have been replaced by new contracts, offering expansions in medical and surgical benefits as well as in hospitalization, over the old contracts. The extensions of benefits were provided at the time an increase in dues became necessary for the operation of the Plan.

The Board of Trustees of the Blue Cross-Blue Shield Plan has begun exploratory steps into the provision of the availability of riders to existing Blue Shield contracts for the provision of out-of-hospital diagnostic services.

It is the desire of the Plan for representatives to meet with each county medical society in the State to thoroughly explain coverages and to receive suggestions from the physicians of the State for corrections of problems and for possible expansions of benefits. This information will be of considerable value to the Plan in developing future programs in Prepayment Health Insurance. It is urged by the Committee that each county medical society make time available at one of their monthly meetings during the year for a representative of the Blue Cross-Blue Shield Plan to visit with them.

SUB-COMMITTEE ON STATE HEALTH AND MEDICAL RESOURCES FOR CIVIL DEFENSE

M. D. McClain, Chairman

As far as can be determined not one person read the report which appeared in The Journal of the Arkansas Medical Society in 1961 of the sub-committee on Civil Defense. Consequently, this report will be more brief and outlined.

In the fall of 1961 a regional meeting which included one third of the United States in this region was attended in which the details of the Medical Self-Help Program was

explained. Only one Kit for teaching instructors was available in Arkansas until February 2, 1962 at which time the State Civil Defense got the states' allocation of about 35 Kits. The aim will be to try to teach one member of each family some basic facts in case they have to do without the medical profession for a period of up to two weeks. This is a long range program to cover approximately three years. All of the para medical groups will be included in this and also the state education department of the state has given their full cooperation. This is a "spoon-feeding" type of program both for the instructor and student as well but with the availability of certificates for this course. It is thought that this will hold the interest during this course to the end as well as stimulating interest during the time.

Recommendations:

1. It is strongly recommended that this sub-committee be made a separate committee of disaster survival with some members being carried on for a term of more than one year. (Some states have a Medical Director appointed by the Governor and others a Medical Director appointed by the President of the respective Medical Society.) This committee should be given more importance and particularly needs more cooperation from the County and Council heads.
2. It is recommended that each individual doctor in the state read and recommend to patients "FALL OUT PROTECTION, WHAT TO KNOW AND DO ABOUT NUCLEAR ATTACK", (pamphlets are available at all Post Offices), not for themselves but to be able to take their proper place in the community.
3. Recommend a conference of the para medical chairmen of disaster committees when the Medical Self-Help Kits are available to them both to expedite this training as well as to have better liaison between these groups which is sorely needed.
4. It is recommended that a sub-committee be appointed possibly from the flying doctors of the state for the purpose of creating a radio network to include doctors and hospitals.

SUB-COMMITTEE ON LIAISON WITH THE AUXILIARY

William A. Snodgrass, Jr., Chairman

The committee met with the Auxiliary on August 6, 1961 at the Marion Hotel from 11:00 a.m. to 4:00 p.m. At this meeting the finances of the Auxiliary were studied and found in very good condition. The Auxiliary requested advice about investing some reserve funds, which was given and accepted by the Auxiliary.

The second meeting was September 28, 1961 at the Coachmans Inn at which time a program was given on "The National Trend Toward Socialism". A very able speaker, Louise Bushnell, from the National Manufacturers Association gave a very excellent talk.

The chairman attended the Pulaski County Medical Auxiliary on Oct. 18th, at which time he spoke to the group on the Kerr-Mills Bill.

We wish to commend the Auxiliary for their tireless efforts and much success toward publicizing and implementing the Kerr-Mills program.

ADVISORY COMMITTEE TO THE MEDICAL ASSISTANTS SOCIETY

Stanley Applegate, Chairman

The Arkansas State Medical Assistants Society, with the help of the Arkansas Medical Society, has organized an educational program. The courses are arranged and conducted under the supervision of the University of Arkansas, Division of General Extension. The first in a series of courses, Medical Terminology, was completed in Texarkana, Fayetteville and Magnolia in the spring of 1961. The same course has recently started under the direction of the University at Fort Smith Junior College. The second course, Anatomy and Physiology has been completed in Fayetteville and Texarkana.

The above courses are sponsored by the Medical Assistants and the Medical Society but anyone interested in preparing themselves for a career in this work may enroll.

The House of Delegates of the Arkansas State Medical Assistants Society met in Little Rock. The following reports were given: Bulletin-Bettye DeBierre, Convention-Mildred Ruck, Education-Francis Reibe, Legislative-Phyllis Walden, Membership-Faye Moser, Public Relations-Louise Carroll, Ways & Means-Maudine Dollorhide, Executive Secretary-Charleen Hardeman.

Following the luncheon, a report was given on the A.A.M.A. Convention held in Reno, Nevada by Frances Reibe. The new State of Nominees for state officers was presented by Veda Tassey, Nomination Chairman.

The Medical Assistants Society will hold their State Convention in Little Rock, Arkansas at the Hotel Lafayette on April 14th and 15th, 1962. Little Rock is planning a good convention and a good time for all—

SUB-COMMITTEE ON VETERANS ADMINISTRATION AFFAIRS

A. J. Forestiere, Chairman

There has been no activity in the Committee on Veterans Administration Affairs during the past year.

COMMITTEE ON INSURANCE

Thomas D. Honeycutt, Chairman

Your Insurance Committee has been most active in the past year, principally in its representation on the HIP Committee (Hospital - Insurance - Physician Committee), where numerous complaints involving hospitalization policies, insurance companies, hospitals and physicians were discussed.

Considerable understanding between the insurance industry and the physicians on the HIP Committee has been reached.

The only other business coming before the Insurance Committee was a proposal by the Pension Planning Company of Kansas City and St. Louis, whereby they proposed to obtain tax sheltered pension plans for individual society members within the Corporate Practice of Medicine Law, recently passed by the Arkansas Legislature. This proposal was not a workable plan, in all probability, since the company, after studying the law, did not pursue the matter further.

The most important recommendations this committee could make are:

1. That physicians be more exact in their completion of insurance forms, both with respect to completeness and accuracy and agreement of forms with other records available, such as hospital records.

2. That physicians become aware of insurance policies and their content and limitations and spread this information to their patients.
3. Continue to be aware that the Insurance Committee stands ready to mediate griefs against insurance companies.

Insurance Committee Addendum:

The Group Life Insurance program for the Arkansas Medical Society, underwritten by Northwestern National Life Insurance Company, has continued to be a good thing for the members of the Society.

At the present time, more than five million dollars are in force. During 1961, five death claims were paid for a total of \$50,000.00. Over half of members obtaining this coverage could not be insured on an individual basis or through other associations, requiring evidence of insurability.

At the present time there is no plan to open the enrollment to those members who did not avail themselves of the opportunity when the plan was inaugurated, however, any new AMS members can purchase the insurance upon joining the Society. Members who now have the basic \$10,000.00 coverage may obtain an additional \$40,000.00 by completing a medical questionnaire.

TRAFFIC SAFETY COMMITTEE

C. Lewis Hyatt, Chairman

Activities of the Traffic Safety Committee during the past year have been as follows:

1) Received and distributed various correspondence and pamphlets and educational material from many sources: the Federal Government, such as Hearings on Motor Vehicle Safety Standards; from AMA and State Medical Societies on activities—such as correspondence concerning the requirement of safety seat belts on all automobiles of 1962 or later in the State of Wisconsin; from the National Safety Council and from many other interested and active groups.

2) Aided and assisted the above listed and other groups in their Traffic Safety endeavors such as continued public support of traffic safety laws—specifically in my own area constant requests to see that the State Livestock Law is enforced.

3) Corresponded, conversed and cooperated with the State Health Officer and members of the State Board of Health in their efforts to promote Traffic Safety. One hundred thirty (130) employees of the State Board of Health have purchased and installed and are using auto safety belts in cars used by them in the State and County Health Departments and in their personal and family cars. This is an excellent example of "practicing what you preach." I have installed one of these safety belts in my private car, and I and members of my family use it regularly. Have you installed one in yours?

COMMITTEE ON CONSTITUTION REVISION

Louis K. Hundley, Chairman

No matters have been referred to this Committee during the past year. Consequently, the Committee has had no meetings.

SENIOR MEDICAL DAY COMMITTEE

Joe Nartan, Chairman

The eighth annual Senior Medical Day, sponsored by the Arkansas Medical Society and the Arkansas Academy

of General Practice, with the assistance of the University of Arkansas School of Medicine, for seniors and their wives or invited guests, was held May 26th 1961 at seven P.M. in the Continental Room of the Hotel Marion in Little Rock. Dr. William A. Snodgrass, President of the Arkansas Medical Society, presided.

Invitations were sent to eighty-two senior medical students and their wives or guests, to the officers and the members of the Council of the Arkansas Academy of General Practice and of the Arkansas Medical Society, to the officers of the Pulaski County Medical Society, and to officials of the University of Arkansas Medical Center; wives were invited.

The officers of the Arkansas Medical Society and of the Arkansas Academy of General Practice, with their wives, formed a receiving line to greet the senior medical students and their wives and guests.

The program is an annual activity of the Arkansas Medical Society. Its purpose is to welcome graduating senior medical students into the medical profession, and to urge students to become not only good professional men, but also to take active part in the various medical organizations, and to participate in civic affairs to promote the well being of the people in the area in which they may practice.

A particular effort was made to keep the entire program relaxed and informal, moving rapidly. The program was completed about nine P.M. Pompous advice was neither solicited nor given.

The excellent panel for the evening included Mrs. Hoyt Choate of Little Rock discussing the Doctor's Wife, Dr. Amail Chudy of North Little Rock, discussing the Doctor In General Practice, and Dr. Thomas Townsend of Pine Bluff, discussing the Doctor In Organized Medicine. Each of these participants did a superb job and their efforts were well received. Dr. Snodgrass conducted the Question and Answer period following the panel.

I can only suggest that this project be continued, but that the date be moved up earlier in the spring. I am grateful to all who helped to make the program such a tremendous success.

COMMITTEE ON LIAISON WITH THE WELFARE DEPARTMENT

C. R. Ellis, Chairman

The Liaison Committee with the Arkansas Welfare Department met on February 8, 1962, along with the Executive Committee, Mr. Carl Adams, Mr. Storm Whaley, and Dean Winston Shorey.

This committee reviewed the discussions and actions of the Executive Committee and the Council concerning the Welfare Department, especially pertaining to the Medical Care of the Aged. After much discussion, the following classification of clinics was recommended to the Executive Committee as our working agreement with the Welfare Department:

CLINICS. Clinics approved to provide services for eligible individuals under the Department Program will be divided into three (3) classifications. These three classifications of clinics are hereby established based upon the recommendations of the Arkansas Medical Society and are designated as Class "A", Class "B" and Class "C" clinics. Definition:

A Class "A" clinic must have within its own resources sufficient facilities and professional staff to render definite diagnostic and therapeutic services in all areas of medical practice. (Psychiatry is excepted for purposes of this defini-

tion). Specifically the facilities and professional staff shall have the capacity of caring for all patients requiring diagnostic or therapeutic service in the fields of dermatology; gynecology; internal medicine; neurology; obstetrics; otorhinolaryngology; ophthalmology; pediatrics; and surgery, including its subspecialties such as cardiovascular, plastic, and thoracic surgery, as well as the more commonly recognized surgical specialties; namely: neurosurgery, orthopedic surgery, and urology. Like clinic shall have included within its own resources the necessary support from radiology, clinical pathology, and tissue pathology to carry out the clinical fields enumerated above. Effective March 1, 1962 the rate of payment for visits for welfare patients will be \$6.00 per visit.

A class "B" clinic must be a part of the operation of a hospital approved and licensed by the Arkansas State Health Department. It must have available approved laboratory equipment; x-ray equipment; and such supplies of drugs as may be necessary; such medical personnel—surgeons, technicians, nurses, and diagnostic services as to qualify it to render adequate diagnostic services and medical treatment to individuals who are eligible under the welfare program for medical services. Effective March 1, 1962, the rate of payment for visits for welfare patients will be \$5.00 per visit.

A class "C" clinic must be approved by the Welfare Department on recommendation of the Arkansas Medical Society and have an emergency room; an approved laboratory; x-ray equipment; and a supply of drugs, dressings and other medical necessities adequate for emergency treatment. The clinic staff must include at least one licensed physician; one registered nurse, or a qualified practical nurse; and such other personnel as may be necessary to provide for the medical care of patients treated. The rate of payment to these clinics will be \$3.00 per visit for welfare patients.

FIRST COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

R. C. Shanlever, Chairman

During the year 1961 my committee has had no grievances presented to us, so there has been very little activity. We have reviewed several Medicare claims and I think these were all settled satisfactorily.

SECOND COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

Jabez Jackson, Chairman

There have been no cases submitted to this committee for the year 1961.

THIRD COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

A. F. Barr, Chairman

Only one case was referred to this committee during the last period, and that by Medicare. In this instance, your committee submitted recommendations for what we believed to be a fair and equitable settlement of the differences involved.

FOURTH COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

H. T. Smith, Chairman

No matters of import have been referred to this Committee during the past year.

SIXTH COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

Jahn Walter Jones, Chairman

The Professional Relations Committee of the Sixth Councilor District handled three cases of Medicare questioning of physicians' statements. In two of these cases, it was felt that the charges and medical treatment were reasonable and indicative. In the other one, it was felt that the charge was a little greater than is usual for that service in this community. The problem presents itself as to why some of these procedures are done on Medicare patients when they are not in any sense of the word emergencies. This summarizes all of the activity of this committee as of this date.

SEVENTH COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

J. W. Kennedy, Chairman

For the year 1961, the Committee processed some 10 or 12 Professional Relations Committee functions regarding Medicare Cases. There was only one case possibly involving lawsuit which was settled out of court, without complications.

There was no outstanding problems for the Committee in the Councilor District. The usual procedure in processing the Medicare claims which were undecided by the Medicare Program were settled satisfactorily.

EIGHTH COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE STATE PROFESSIONAL RELATIONS COMMITTEE

Richard M. Lague, Chairman

The only problems that have come before the State Professional Relations Committee for the year 1961 have been handled by telephone survey of the respective members of this committee. No official meetings were held. The same is true for the Eighth Councilor District.

TENTH COUNCILOR DISTRICT PROFESSIONAL RELATIONS COMMITTEE

This committee has only been presented with one complaint during the past year. This complaint was concerning a fee charge, was thoroughly investigated, and settled amicably.

Your committee has also adjudicated all Medicare claims from this district which were not covered by the Medicare Schedule.

There has been no other activity by this committee, and no other matters have been presented requiring action.

ADVISORY COMMITTEE TO THE ARKANSAS SELECTIVE SERVICE SYSTEM

Gerald H. Teasley, Chairman

There has been very little activity of the Advisory Committee during the year 1961. This is due principally to the fact that physicians and dentists have volunteered for active duty upon completion of their internship and or residency, thus making it unnecessary to call physicians or dentists who are already in practice.

The recent flurry in military activity as a result of call to active duty of reserve units did not appreciably affect the status of this committee. One or two requests for the

status of individuals were received and acted upon without undue difficulty.

COMMITTEE ON ARRANGEMENTS FOR THE ANNUAL SESSION

W. Martin Eisele, Chairman

The Committee on Arrangements of the annual meeting of the Arkansas State Medical Society held its first meeting in August, 1961 and has held several meetings intermittently since that time. The last, and probably final, meeting was held at the Arlington Hotel, February 1st.

It would seem, from reviewing the past history of the Committee, that each year presents very consistent and similar difficulties. Several years back a plan was instituted whereby each Specialty Section would submit to the Committee the names of at least two well qualified men in their respective specialties in order that the Committee could attempt to obtain one as the speaker for the annual meeting. Consistent with the experience of the past two years, this year, apparently, was no different in that most of the sections were very cooperative and prompt in assisting our committee, whereas others, in spite of repeated contacts, never made any specific suggestions. This committee could rationalize no other choice but to cooperate with those sections that were most cooperative with us. The results of this might well be reflected in our annual scientific program.

One departure from the traditional format of the annual meeting was made. In view of the many recreational and entertainment facilities available in Hot Springs, the committee recommended the omission of the annual dance. This action was approved by the Council of the State Society.

At the present time the arrangements of the Scientific program, and practically all details of the annual meeting have been completed. We feel this will be one of the best meetings in the history of the Society.

We would like to close this report with one very specific suggestion to all members who expect to attend the annual meeting and that is if anyone anticipates attending any of the local places of entertainment, we strongly urge each one to individually make reservations far in advance. Details of entertainment, time of shows, minimum cover charge, and other details will be found elsewhere in the Journal.

REPORT OF THE COUNCIL

Joe Verser, Chairman

The Council of the Arkansas Medical Society met on June 15th, 1961 and transacted the following business:

- I. Approved plans of the State Welfare Department for implementation of the Kerr-Mills Law in Arkansas on July 1st, 1961.
- II. Referred to the Society delegates to AMA a resolution on para-medical personnel submitted by Arkansas pathologists.
- III. Went on record opposing federal aid to education.
- IV. Approved payment of expenses for Dr. Snodgrass, president, to the AMA meeting in New York.

The Council met on August 20th, 1961 and transacted the following business:

- I. Confirmed the appointment of Dr. Fred B. Stone as Chairman of the Third Councilor District Professional Relations Committee.
- II. Approved the Executive Committee's selection of

nominees for AMA Legislative Keyman from Arkansas:

C. Lewis Hyatt
Fount Richardson
J. J. Monfort

- III. Adopted a resolution putting the Society on record as feeling that the American Medical Association does represent its will and desire and reiterated the full confidence of the Arkansas Medical Society in the American Medical Association.
- IV. Approved new plans submitted by the State Welfare Department for implementation of the Kerr-Mills Law in Arkansas to be effective September 15th. Plans called for payment of \$3.00 for office visits.
- V. Directed the Executive Secretary to request clarification of a contract revision by Medicare requiring that maximum fees no longer be divulged to Arkansas physicians.
- VI. Appointed a committee to study the operation and structure of the State Professional Relations Committee with a view to making it more active.
- VII. Approved a "Standards of Practice Governing the Relationship between Lawyers and Physicians" and directed that it be published in the Journal of the Arkansas Medical Society.
- VIII. Referred to the Executive Committee of the Council a decision on whether to send a representative to a meeting of the United States Chamber of Commerce meeting in St. Louis. The Executive Committee decided to ask Dr. Snodgrass, president, to attend.

The Council met on December 10th and transacted business as follows:

- I. Observed a moment of silence in memory of Dr. Fount Richardson, who passed away on November 23, 1961.
- II. Adopted a resolution memorializing Dr. Richardson.
- III. Upon hearing the resignation of Dr. Fred Stone, because of ill health, Dr. Paul Millar of Stuttgart was elected to fill Dr. Stone's unexpired term as Councilor of the Third District. Dr. John Hestir was elected to fill Dr. Stone's unexpired term on the Professional Relations Committee of the Third District.
- IV. Decided that in view of the many fine private clubs in Hot Springs that a dance in connection with the 86th Annual Session would not be held.
- V. Decided against issuing new charters to old county societies adopting new constitutions.
- VI. Approved the decision of Blue Cross-Blue Shield to postpone selling a special insurance policy to persons over 65 pending modification of the policy to overcome administrative problems.
- VII. Approved a condensation of a report by A. T. Kearney and Company, Management Consultants, on the operation of Arkansas Blue Cross-Blue Shield. The Council adopted a vote of confidence in and appreciation of the work of the members of the Board of Trustees of Blue Cross-Blue Shield.
- VIII. Approved Executive Committee action allowing payment of one-half travel expense for legal counsel to attend a meeting on medical quackery in Washington, D. C., and for the Chairman of the Civil Defense Committee to attend a Civil Defense meeting in California.
- IX. Voted to table action on the Medicare contract modification requiring that maximum fees no longer be divulged to Arkansas physicians.

- X. Approved the transfer of \$3500 from the Society's Medicare operating fund to the general funds of the Society.
- XI. Adopted a resolution opposing the Kefauver-Celler Bill to regulate pharmaceutical manufacturing.
- XII. Heard State Welfare Department discuss developments and criticism of the Arkansas implementation of the Kerr-Mills Bill and the difficulty of protecting the income of the University of Arkansas Medical Center while eliminating criticisms in connection with the clinic phases of the program and satisfying the requirements of the United States Department of Health, Education and Welfare.
- XIII. Endorsed a program for a health examination survey by the United States Public Health Service in Jackson and Lawrence counties.
- XIV. Directed the Chairman to appoint two members to serve on a state committee on Civil Defense to promote Medical Self-Help-Education.
- XV. Directed the Executive Committee of the Council to appoint a Board of Directors, comprised of one physician from each Councilor District for the American Medical Political Action Committee.

The Council met after the general meeting of the Society on December 19th, 1961 and transacted the following business:

- I. Adopted a classification of clinics under the Kerr-Mills Program designed to overcome objections to the clinic phase of the program and protect the University of Arkansas Medical Center income.
- II. Authorized necessary funds for a program to buy advertisements publicizing the Kerr-Mills Program and asked the Executive Committee of the Council to implement this action. The Executive Committee subsequently approved necessary funds and copy for ads which appeared in nine Arkansas newspapers and the Commercial Appeal of Memphis.

REPORT OF DELEGATES TO AMERICAN MEDICAL ASSOCIATION

James M. Kolb and Jack W. Kennedy

The Denver Meeting

This summary covers only a few of the many important subjects dealt with by the A.M.A. House of Delegates at its Denver meeting and is not intended as a detailed report on all actions taken.

SOCIAL SECURITY health care, relations with the American College of Surgeons, organization of the American Medical Political Action Committee, medical discipline and poliomyelitis vaccine were among the major subjects acted upon by the House of Delegates at the American Medical Association's Fifteenth Clinical Meeting held November 26 to 30 in Denver.

Sounding the keynote for the Association's campaign to oppose enactment of the King-Anderson type of legislation in 1962. Dr. Leonard W. Larson of Bismarck, N. D., A.M.A. president, told the opening session of the House that proposals to incorporate health care benefits into the Social Security system "would certainly represent the first major, irreversible step toward the complete socialization of medical care."

The compelling issue, Dr. Larson declared, is socialization versus voluntarism—or compulsion versus freedom of choice. He predicted that courage, determination and the will to win on the part of physicians will bring the defeat of the King-Anderson Bill in Congress next year.

Pointing out that "we are engaged in an historic struggle to preserve our country's unique system of medical care and our stature as a profession," Dr. Larson said:

"We are for voluntarism. We do not believe that Americans, acting either as citizens or as patients, require central direction from government in their choice of doctor or hospital, in the spending of their health care dollars, or in their selection of the health services and facilities best suited to their own individual needs.

"We take our stand for voluntary cooperation, for preservation of the historic federal-state organizational structure, for individual responsibility, for help for those persons who need help."

Dr. Larson emphasized that the A.M.A. will continue to give primary attention to implementing the Kerr-Mills Act in the states, promoting voluntary health insurance and prepayment plans designed for the aged, and upgrading nursing homes.

The House of Delegates gave enthusiastic approval to Dr. Larson's address and took several actions reaffirming strong support for the Kerr-Mills program to aid the needy and near-needy aged, and urging a concerted, determined fight against Social Security health care proposals in Congress.

The House advised all state and county medical societies to recognize the impending threat and to prepare now for any eventuality by continuing to oppose any scheme which tries to impose a sub-standard system of medical care on the American people.

"United, as well as individual effort, is essential," the House declared. "To stop short of our total effort is to invite disaster and to let loose upon our beloved America irreversible forces which will ultimately destroy her. We cannot and we must not fail."

American College of Surgeons

The House agreed with the intent of five resolutions which expressed strong dissatisfaction over recent statements by a spokesman for the American College of Surgeons, and it also approved a Board of Trustees report informing the House that arrangements have been made for a January meeting with the A.C.S. Board of Regents to discuss the organization's recent statements and policy positions. The report expressed hope that the meeting "will lead to a unification of effort in behalf of American medicine."

The House instructed the Board of Trustees to take the five resolutions to the January meeting and to report to the delegates as soon as possible on the results of the meeting. In taking the action, the House approved a reference committee report which said:

"Your reference committee believes the public airing of disagreements between large segments of medicine can only confuse and shake the confidence of the public in the medical profession and distort the true image of medicine which the American people should have.

"However, in its hearings upon the several resolutions relating to the recent statements of the American College of Surgeons, all those who testified were in opposition to the actions and statements of the A.C.S. The majority of those who spoke were Fellows of the American College of Surgeons.

"Your reference committee has no wish to fan the flames of controversy ignited by the statements of the American College of Surgeons. On the other hand, the committee feels the House has an obligation to its membership—which includes physicians in all types of practice—to agree with the indignation manifested by the introduction of these resolutions and in the discussions before the committee.

"This is all the more important because the position of

the American College of Surgeons is based on an incorrect interpretation of the action of this House which in no sense is a retreat from its position of firm opposition to fee splitting."

American Medical Political Action Committee

The House heartily approved the purposes and goals of the recently-organized American Medical Political Action Committee and urged all physicians, their wives and interested friends to join A.M.P.A.C. and other political action committees in their states and communities.

"Effective political action must be carried on at the local level and effective implementation must be done by local groups of physicians," the House said. "The formation of A.M.P.A.C. recognizes the need for a national medical political action committee to coordinate the political activities of physician groups at all levels throughout the country."

The purposes of A.M.P.A.C., which is an organization separate and distinct from the American Medical Association as required by federal law, are:

1. To promote and strive for the improvement of government by encouraging and stimulating physicians and others to take a more active and effective part in governmental affairs.
2. To encourage physicians and others to understand the nature and actions of their government as to important political issues and as to the records and positions of political parties, officeholders and candidates for elective office.
3. To assist physicians and others in organizing themselves for more effective political action and for carrying out their civic responsibilities.
4. To do any and all things necessary or desirable for the attainment of the purposes stated above.

Medical Discipline

The House received from the Council on Constitution and By-laws a proposed amendment which would have made it possible to implement a recommendation by the Medical Disciplinary Committee that was approved by the House at the June, 1961, meeting. This recommendation was to change the by-laws so as to confer original jurisdiction on the Association to suspend and/or revoke the A.M.A. membership of a physician found guilty of violating the Principles of Medical Ethics or the ethical policies of the Association, regardless of whether or not action has been taken against him at the local level. However, after considerable discussion on the floor of the House, the proposed amendment was referred back to the Council on Constitution and By-laws.

In another action on medical discipline the House approved the expanded activities of the Judicial Council, which has taken over permanent responsibility in that area, and said that the Council program should benefit all physicians, the public and the profession.

Poliomyelitis Vaccine

The House adopted a resolution which urged that medical societies at the local, county, district or state levels throughout the United States should encourage, stimulate and participate in surveys to determine the percentage of individuals in each community who have undergone immunizing procedures for poliomyelitis.

The resolution stated that on the basis of the results of the surveys, the local medical society should determine the type of vaccine and the most effective type of program which will be of greatest benefit to the public.

Until such time as all three types of oral vaccine are

available, the resolution concluded, the Salk vaccine should be the vaccine of choice for routine poliomyelitis immunization, with the choice of program for administering the vaccine to be determined on a local basis by each county medical society.

Miscellaneous Actions

In considering a wide variety of resolutions and annual and supplementary reports, the House also:

Disapproved of two proposals which would have required that resolutions be introduced 30 and 45 days, respectively, before Association meetings.

Approved a statement that physicians have an ethical obligation to participate in medical society activities and express their opinions fully and freely.

Reaffirmed A.M.A. policy that it is not considered unethical for a physician to own or operate a pharmacy provided there is no exploitation of the patient.

Agreed with the Judicial Council that the physician himself is responsible for the control and custody of drug samples once they come into his possession, and in the high tradition of the medical profession he should not dispose of them in any way that could cause harm to others.

Commended those constituent medical societies which have moved forward in the area of human relations by eliminating membership restrictions based on race or color. In connection with the same subject, Dr. Peter Murray of New York, retiring after 12 years of service in the House, told the delegates in a farewell address that Negro physicians now have some kind of medical society membership in every state except one.

Approved a recommendation that a special House committee be appointed to investigate all facets of the operation of the Joint Commission on Accreditation of Hospitals.

Agreed with the Board's choice of Miami Beach, Florida, as the site for the 1964 Clinical Meeting.

Approved the combining of the American Medical Education Foundation and the American Medical Research Foundation into the American Medical Association Education and Research Foundation, effective January 1, 1962.

Deferred action on a proposed study of fund raising by voluntary health agencies, pending the development of additional information by the A.M.A. Committee on Voluntary Health Agencies.

Reaffirmed the previous policy that physicians have the privilege of prescribing drugs by either generic or brand name.

Approved the principle of income tax deductions for medical care of the aged.

Recommended, in reviewing the Medicare Program, that all county medical societies in the area surrounding armed forces hospitals make a serious attempt to establish formal liaison with the physicians on those hospital staffs.

Endorsed the administration of indigent medical care programs developed in cooperation with local medical organizations as a legitimate activity of state and local health departments.

Urged the elimination of all "categories" in programs of assistance to the needy at the federal and state level, with all assistance provided through a single program.

Referred to the Council on Medical Services a resolution proposing the use of state and federal tax funds to provide voluntary prepayment health insurance protection for the aged. In a related action the House approved of experimentation with prepayment plans under assistance programs.

Urged more vigorous promotion of voluntary non-profit prepayment health plans.

Urged every physician in the United States to use automobile seat belts.

Recommended, as a civil defense measure, a mass immunization program for the general public.

Suggested that the Board of Trustees continue its negotiations to develop a group disability insurance program for A.M.A. members.

Concurred in the Board's appointment of a special committee to study the organizational status of A.M.A. Sections, the functions of the Scientific Assembly and existing procedures for establishing medical certifying boards.

Instructed the Council on Medical Education and Hospitals to study the present and potential contribution of the American Board of Abdominal Surgery to the advancement of the art and science of surgery and the betterment of public health, to determine whether it should be approved as a recognized examining board.

Approved and commended the objectives and program submitted by the Committee for Liaison with National Nursing Organizations.

Recommended that the Secretary of Defense consider the advisability of developing a training program for reserve medical officers.

The A.M.A. Board of Trustees presented a special citation to the producers and cast of The Donna Reed Show for its "contribution to public understanding of the high ideals of the medical profession." Carl Betz, who portrays Dr. Alex Stone on the television show, received the award from Dr. Hugh H. Hussey Jr., A.M.A. Board chairman, at the Wednesday Session of the House.

Contributions totaling \$435,275.93 from member physicians in six states were presented to the American Medical Education Foundation.

Final registration at the meeting reached a total of 6,138, including 2,976 physicians.

REPORT OF THE EXECUTIVE SECRETARY

Mr. Paul C. Schaefer

The income of the Arkansas Medical Society, due to the efforts of the Council and the headquarters staff, has almost tripled in the past 12 years. The expanded legislative, educational and organizational activities have also increased expenses. These activities are subject to the wishes and control of the Council and the House of Delegates.

Not subject to the control of the Society or the headquarters is the inexorable pressure of the progressively increasing inflation. If one accepts the oft repeated government figure of "only 3%" inflation per year the cumulative effect is 36% increase in costs in the period mentioned. The rate of increase of inflation goes on at a quickened pace year in and year out with every government deficit budget.

Society income has leveled off in the neighborhood of \$100,000 but costs of carrying on the same amount of activity

continue to rise. For example, in 1961 the Society spent approximately \$3400 on postage. If one breaks this down into four cent stamps, it amounts to 85,000 pieces of mail. Applying this number to the first class postage rate (3 cents) in 1958 results in a figure of \$2550. If not one more piece of mail is dispatched from our office in 1962, the cost will be at the rate of \$4250 per year. This, of course, is due to the increase in first class postage rates to five cents which may have gone into effect by the time of the Society's convention. Thus the increase in this one budget item alone in the short span of only four years has increased 40% or \$2000. Similar, though not as precisely measurable, increases in cost due to inflation alone have elevated almost every item in our budget.

With our income apparently stabilized at about \$100,000, the Society finds itself much in the same position as a retired person on a fixed income—at the mercy of the forces of inflation—who in order to live within his income must not only economize and restrict his activities, but must reduce them a little each year.

BUDGET COMMITTEE

W. R. Brooksher, Chairman

The following proposed budget has received the careful study of the Budget Committee.

Three courses of action are available to the Society at this time:

1. The Society may pare its expenditures to correspond with its present curtailed income. This has the obvious connotation of decreased Society activity and growth and curtailment of functions. This may be most important to current political problems. Certainly the established growth pattern of the Society will be seriously impaired. Seeking possible cuts in addition to those mentioned, I can only see a further reduction in the amount budgeted for "travel and convention" and the "Arkansas Breakfast budget". I have no desire to support a move for cancellation of these although I am of the opinion that a case may be made for their deletion.
2. The Society may operate on the proposed budget which is definitely a "deficit" budget. This may be popular in present Federal government affairs but does not meet with my approval.
3. We can realize that we are a part of a growing, alert, medical organization, one which has fully emphasized its worth to its individual members, to the people and to other state societies. Our growth pattern can only be maintained by proper financing. There is but one solution, as I see it, for the provision of additional income and that is by increase in the annual assessment.

PROPOSED BUDGET

Income

| BUDGET ITEM | PROPOSED AMOUNT | REMARKS |
|-----------------------|-----------------|---|
| Membership Dues | \$35,700.00 | Does not include \$5 earmarked for Medical Education Foundation |
| Journal Advertising | 30,000.00 | |
| Booth Income | 5,000.00 | \$4,725 for sale in Hot Springs |
| Annual Session Income | 5,450.00 | |
| AMA Reimbursement | 250.00 | |
| Income from Medicare | 20,000.00 | Includes \$1,685 earned but not received in 1961 |

ARKANSAS MEDICAL SOCIETY MEETING, APRIL 29-MAY 2, 1962

| | |
|-------------------|-------------|
| Miscellaneous | 300.00 |
| Interest on Bonds | 2,770.00 |
| Retirement | 198.00 |
| | ----- |
| | \$99,668.00 |

Expense

| BUDGET ITEM | PROPOSED AMOUNT | REMARKS |
|----------------------------|-----------------|--|
| Salaries— | | |
| Medicare | \$10,500.00 | |
| Journal | 10,620.00 | |
| A.M.S. | 13,886.00 | |
| | \$35,006.00 | |
| Travel and Convention | 9,500.00 | |
| Taxes | 640.00 | |
| Retirement Fund— | | |
| Medicare | 900.00 | |
| A.M.S. | 2,021.00 | |
| | 2,921.00 | |
| Stationery & Printing | | |
| Medicare | 600.00 | |
| A.M.S. | 800.00 | |
| | 1,400.00 | |
| Office Supplies & Expense | | |
| Medicare | 2,500.00 | |
| A.M.S. | 1,500.00 | |
| | 4,000.00 | \$1,400 for IBM Medicare work |
| Telephone & Telegraph | | |
| Medicare | 500.00 | |
| A.M.S. | 1,800.00 | |
| | 2,300.00 | |
| Rent— | | |
| Medicare | 1,000.00 | |
| A.M.S. | 1,136.00 | |
| | 2,136.00 | |
| Postage— | | |
| Medicare | 700.00 | |
| | | |
| A.M.S. | 3,000.00 | \$400 added for postage rate increase |
| | 3,700.00 | |
| Insurance & Bonds | | |
| Medicare | 150.00 | |
| A.M.S. | 499.00 | |
| | 649.00 | |
| Auditing | | |
| Medicare | 510.00 | |
| A.M.S. | 150.00 | |
| | 660.00 | |
| Council Expense | 300.00 | |
| Journal Printing & Expense | 27,500.00 | Increased advertising, in-creased printing rates; Includes expense for lease and operating Society car |
| Annual Session | 7,500.00 | Probably too low |
| Senior Medical Day | 500.00 | |
| Public Relations | 1,500.00 | \$711 already spent in 1962 for Kerr-Mills advertising |
| Dues & Subscriptions | 500.00 | |
| Contributions & Gifts | 715.00 | |
| Woman's Auxiliary | 1,100.00 | |
| Legal Service | 2,200.00 | |

ARKANSAS MEDICAL SOCIETY MEETING, APRIL 29-MAY 2, 1962

| | |
|--------------------|----------|
| Special Committees | 300.00 |
| Rural Health | 500.00 |
| Miscellaneous | 175.00 |
| Freight | 100.00 |
| Arkansas Breakfast | 1,600.00 |
| Depreciation | 1,100.00 |
| Office Equipment | 700.00 |

\$109,202.00

**REPORT OF THE ARKANSAS STATE
MEDICAL BOARD**

Joe Verser, Secretary

The Secretary of the Arkansas State Medical Board makes the following report of the activities of this Board since the last meeting of the Arkansas Medical Society:

The Officers and Members are as follows:

Frank M. Burton, M. D., Chairman
Jeff Baggett, M. D., Vice-Chairman
Joe Verser, M. D., Secretary and Treasurer
G. D. Murphy, Jr., M. D.
Wm. A. Snodgrass, Jr., M. D.
H. J. Hall, M. D.
Hugh R. Edwards, M. D.
Earle D. McKelvey, M. D.
John F. Guentlner, M. D.

The Board investigated every case of violation of the Medical Practice Act reported to the Secretary during the year. Two court convictions were obtained and six cases are now pending. Two injunctions were issued.

The Board revoked the license of one physician because of a narcotic violation, this physician having previously been convicted in Federal Court.

A yearly financial report of the Board's activities, as prepared by Johnson, Freeman & Company, Certified Public Accountants, was sent to and approved by the Council of the Arkansas Medical Society and published in the Journal.

Following is a report of the Board's proceedings from February 1, 1961 to February 1, 1962:

| | |
|---|------|
| Physicians registered for 1962: | |
| Resident | 1224 |
| Non-resident | 689 |
| Physicians licensed by examination | 80 |
| Physicians licensed by reciprocity | 33 |
| Physicians certified to other states | 83 |
| Licenses revoked for non-payment of annual registration fee | 29 |
| Licenses suspended for non-payment of annual registration fee | 58 |
| Court convictions obtained | 2 |
| Cases pending | 6 |
| Injunctions issued | 2 |
| Licenses revoked | 1 |

Following is a financial report covering the period February 1, 1961 to February 1, 1962. A yearly audit will be made in June, 1962.

| | | |
|---------------------------------------|-----------|-----------|
| Cash balance in bank—February 1, 1961 | 9,843.21 | |
| Time deposits | 14,102.25 | 23,945.46 |

RECEIPTS:

| | | |
|---|----------|-----------|
| Registration fees | 7,412.00 | |
| Certification fees | 1,265.00 | |
| Reciprocity fees | 4,200.00 | |
| Examination fees | 4,475.00 | |
| Duplicate certificates | 15.00 | |
| Directory sales | 192.00 | |
| Physical Therapy fees and dues | 326.00 | |
| Temporary permits | 130.00 | |
| Miscellaneous | 54.10 | |
| Medical Corporation registration fees | 210.00 | |
| Interest on time deposits | 424.71 | 18,703.81 |

TOTAL CASH AVAILABLE 42,649.27

DISBURSEMENTS:

| | | |
|--|----------|-----------|
| Salaries, FICA taxes, Board Members' fees and expenses | 9,549.09 | |
| Attorney's fee, expense and investigations | 2,807.67 | |
| Dues and expenses to Federation of State Boards of U.S. | 600.00 | |
| Office rent, supplies, printing, telephone, postage, etc | 2,027.68 | |
| Refund of fees | 592.50 | |
| CPA audit | 175.00 | |
| Physical Therapy expense | 31.00 | |
| Miscellaneous—returned checks, bond, box rent, etc. | 125.50 | 15,908.44 |

| | | |
|---------------------------------------|-----------|-----------|
| Cash balance in bank—February 1, 1962 | 12,213.87 | |
| Time deposits | 14,526.96 | 26,740.83 |
| | | 42,649.27 |

**ANNUAL REPORT TO THE ARKANSAS
MEDICAL SOCIETY**

From Arkansas State Board of Health

John T. Herron, M.D., State Health Officer

Vital Statistics

A total of 41,006 current births were recorded in the calendar year of 1960, representing a rate of 229.6 per 100,000 population. 17,801 deaths were recorded, showing

a death rate of 99.7 per 100,000 population. Also, a total of 703 fetal deaths were recorded, representing a rate of 1.7 per 100,000 live births.

The ten leading causes of death for 1960 were as follows:

| Cause of Death | Total | Rate per 100,000 Pop. |
|---|-------|-----------------------|
| 1. Heart disease (all forms) | 6,621 | 370.7 |
| 2. Neoplasm (cancer) | 2,410 | 134.9 |
| 3. Vascular lesions affecting central nervous system (stroke) | 2,284 | 127.9 |
| 4. Accidents (all forms) | 1,191 | 66.7 |
| 5. Influenza and Pneumonia | 901 | 50.4 |
| 6. Diseases of early infancy | 563 | 31.5 |
| 7. Diabetes mellitus | 249 | 13.9 |
| 8. Nephritis and Nephrosis | 218 | 12.2 |
| 9. Diseases of liver, gallbladder, and pancreas | 183 | 10.2 |
| 10. Tuberculosis (all types) | 168 | 9.4 |

All deaths are coded as to the primary statistical cause according to the rules of the *Manual of Joint Causes of Death* as set forth in the *International Statistical Classification of Diseases, Injuries, and Causes of Death*.

There were 8,120 delayed birth certificates and 11,272 prior to the year 1914 certificates of birth placed on file during the year 1960.

18,647 marriages and 6,791 divorces were filed in the year 1960. This represents a ratio of 2.7 marriages to each divorce. We are current in alphabetizing, numbering, and binding of marriage and divorce records.

A total of 983 adoptions were processed during the year 1960. Also, a total of 166 legitimations and a total of 147 changes of names by Court order were processed.

Hospitals and Nursing Homes

During 1961 the Division of Hospitals and Nursing Homes licensed 139 hospitals, 11 infirmaries, and 100 nursing homes. Several new hospitals and nursing homes were licensed. Privately financed additions were constructed to seven nursing homes in the State, adding a total of 164 beds. Thirteen new privately financed nursing homes, adding a total of 530 beds, were completed. Five new privately financed nursing homes are now under construction, with a total of 286 additional beds. Also two additions to existing nursing homes, adding a total of 41 beds, are now in the planning stage.

Progress in obtaining compliance with the Licensing Law and Standards for Nursing Homes in the nursing homes in the State is continuing. The Division now has a fairly adequate staff for use in the nursing home inspection and licensure program.

The annual revision of the "State Plan for the Construction of Hospitals and Related Facilities" was made as required under the federal Hill-Burton Hospital Construction Program.

Under the Hill-Burton Program three nursing home projects, two rehabilitation center projects, and two public health center projects were completed during the year. Construction was underway on fourteen other projects, and plans were being prepared on fourteen others. Also, there were ten hospital construction projects underway where the cost of construction was paid from local funds.

Plans and specifications for all hospital and nursing home construction in the State are reviewed and approved by the Division. Other services provided by the Division personnel include inspection of all hospital and nursing home construction and routine inspection of hospitals, nursing homes, and buildings which are proposed for use as nursing homes.

Public Health Education

The procurement, processing, and utilization of literature and audiovisual equipment and material have been continued as in years past.

Literature processed through this Division includes approximately 300 titles on a wide range of health subjects. These are available to the public through local health departments.

At the end of the year the film library was composed of approximately 1,100 titles, with 1,600 prints. There were 10,516 bookings of material, with an average of 25 viewers to the booking. State Health Department health films are used by schools, community groups, churches, hospitals, and medical, nursing, and dental professional groups, and schools for the training of these. Consultation and instruction on the use of audiovisual materials and equipment have been given to new personnel when requested.

The Division has given assistance to other bureaus and divisions on request in conducting workshops, seminars, courses, etc. Also, the Director and the health educator spoke to several professional and community groups in the State on invitation on subjects relating to health education. A major project of the year was a series of staff education conferences for public health nurses on the basic concept and methods of public health education.

At the present time this Division, in cooperation with the State Library Commission, is engaged in a project directed toward placing up-to-date collections of health education materials in all the public libraries of the State.

Local Health Services

Established basic local public health services are being maintained and improved when possible. Certain services such as tuberculosis control, chronic disease services, and civil defense or radiological health services are being added and expanded. However, these services as well as many direct services to the local communities provided by the State Health Department are still below minimal adequate standards. It is impossible to reach desirable standards and add needed services without considerable additional financial support from local, state, and national (federal) appropriating bodies.

The recruitment of qualified professional personnel in public health is still a major problem due chiefly to our low salary scales. We continue to lose highly trained personnel to other higher paying opportunities. The total number of full-time public health workers now employed in the State is approximately 50 per cent of the number needed to render minimal adequate services.

The total health of our population will improve as advances are made in new medical discoveries, new and improved immunizations, advances in environmental sanitation, nutrition, improved foods and diets, as well as advances in early detection, diagnosis, and treatment of preventable and curable diseases and disorders. The knowledge and awareness of the public and its interest in demanding needed services to improve its total health will eventually eliminate many diseases, disabilities, and disorders in our population.

Communicable Disease Control

Again in 1961, as in 1960, approximately 1,000 more cases of notifiable diseases and conditions (951 and 1,045 respectively) were reported than during the previous year. Our first thought is that reporting is improving, but the increase in reported cases of infectious hepatitis (258 to 1,005) accounts for much of the total increase. Other noticeable

increases occurred in animal bites (1,064 to 1,209), cancer (1,126 to 1,339), and measles (1,410 to 1,769). Noticeable decreases occurred in German measles (218 to 168), mumps (1,071 to 769), rabies in animals (320 to 234), streptococcal sore throat (332 to 270), tularemia (73 to 60), and typhoid fever (52 to 32). These figures largely account for the net increase of 931 cases.

The first case of botulism recorded in Arkansas morbidity occurred when a 36-year-old white female resident of White County was hospitalized in an adjoining county on November 23 with acute food poisoning and died within seven hours. The death certificate was signed out as "food poisoning, probably botulism." First information came from the death certificate filed in the Bureau of Vital Statistics, December 6, 1961; no further details were available to substantiate the diagnosis of botulism.

For the 13th consecutive year no smallpox case has occurred in the State; and for the 2nd consecutive year no proven malaria case has been recorded, and for the 11th year no case of local transmission of malaria has been proven. The 4 cases of diphtheria and the 23 cases of poliomyelitis reported constitute an all-time low for these conditions. Intensification of immunization of susceptibles will keep our sights on the goal of eradication.

1961 duplicated the 1958 all-time low of 32 cases of typhoid fever since recording began in 1920. The all-time high reporting of typhoid fever was in 1925 when 1,367 cases were reported. Of the 32 cases reported in 1961, 5 were traced to a chronic typhoid carrier who was identified in 1960 when she was responsible for 8 cases. All 13 cases were family contacts. The sources of the 2 cases in Mississippi County were found to be the patient's grandmother in each instance. One patient's grandmother lived in Mississippi County, and the other patient's grandmother in Sharp County. Sources were not located for the other 25 cases: Pulaski County 4; Benton County 3; Desha, Garland, Grant, Pope, 2 each; and Boone, Chicot, Jefferson, Lee, Miller, Monroe, Sebastian, Sharp, Van Buren, Yell, 1 each. One: other "grandmother" carrier was identified in Ouachita County by epidemiological investigation resulting from a case in a California resident who had visited her grandparents and other relatives in Arkansas. Three known carriers moved into Arkansas from other states, but one subsequently returned to the state of origin. One Arkansas carrier also moved to another state during 1961, two carriers died, and two were released after complying with Arkansas State Board of Health regulations. We can expect an occasional case of typhoid as long as there are 110 known active carriers of the 182 that have been identified, even though this group remains under surveillance. Also there are obviously some "missed cases", as well as unknown number of typhoid carriers that for some reason or other elude identification, who compose the reservoir of the infection.

We are grateful to the American National Red Cross for furnishing, free of charge, gamma globulin to Arkansas for the 17th consecutive year. The supply is meager and is allocated on a population basis to the counties of the State for distribution through the local health departments for use in prevention of measles (rubeola) and infectious hepatitis in family contacts. Demands for gamma globulin greatly exceed the local supply; therefore, every effort should be made to utilize privately purchased gamma globulin when possible.

Tetanus reporting in most instances has been from death certificates, with 11 cases reported each of the past two years.

Slight increases were noted for amebiasis, blastomycosis, brucellosis, encephalitis, histoplasmosis, enteric conditions, and endemic typhus fever, as well as occupational disease of the eye. It is obvious that under-reporting is a common occurrence in all conditions. The more serious the ailment, usually the more dependable reporting is; however, we endeavor to follow leads of outbreaks in order to improve the accuracy of the Arkansas incidence of disease that we may, in turn, make available to the medical profession a more accurate statistical picture of the true situation in Arkansas.

Veterinary Public Health Services

The veterinary public health program of the State of Arkansas experienced a very busy year in the area of animal diseases transmissible to man, as well as conditions which are common to man and animals. The problems encountered were approached with vigor and enthusiasm. The idea behind such efforts was to expedite the distribution and application of all known knowledge relative to the control of these animal diseases. A particular effort was made to place much material and information in the hands of local health units, veterinary practitioners, physicians, and other interested individuals and agencies.

A few of the diseases which are readily acquired by man from animals and prevalent in Arkansas are: rabies, brucellosis, leptospirosis, tularemia, anthrax, bovine tuberculosis, psitticosis, salmonellosis, equine encephalomyelitis, and a number of fungus diseases, such as blastomycosis, histoplasmosis, actinomycosis and nocardiosis. Other diseases which occur to a slightly lesser extent and may be associated with animals are tetanus and ringworm.

For 1961, the State of Arkansas had a total of 246 cases of rabies reported in animals. This total represents a reduction of 94 cases from the previous year. The reduction was more noticeable in the dog populations of the State. For example, the reported cases of positive rabies in dogs was almost 50 per cent fewer. There were seven or eight fewer cases reported in foxes, while cattle had more cases reported as positive over the year 1960. A breakdown of the reported cases of rabies in animals by species is as follows: foxes 107; dogs 41; cattle 81; cats 7; others 10. The State Hygienic Laboratory examined 803 animal heads for rabies during the year 1961. During the year 1961, the State Health Department received reports of 1,209 animal bites to humans. Out of this number of exposed individuals to animals bites it was necessary for the family physician to administer the Pasteur treatment to a reported 474 individuals. The records also indicate that well over 90,000 dogs maintained in the State received injections of preventive vaccine for rabies. The State of Arkansas still has sizeable and serious rabies problems to combat. This is especially true of the fox and cattle populations of the State.

The State Health Department prepared a brochure on the Control of Rabies and Dog Bite Cases and distributed to physicians, veterinarians, public health units, and emergency hospital clinics. This publication was well received by all interested individuals as being timely and helpful in the treatment and phases of management in connection with animal rabies and human exposures.

The Animal Morbidity Report which is published each month and distributed by the State Health Department continues to receive excellent response from interested individuals and agencies. The report has a reputation of being one of the most interesting, and perhaps the "Number 1" report, of its kind in the United States.

In addition to the above activities, the Division of Veterinary Public Health had an active part in two research

projects: 1) Pre-exposure human rabies protection for high risk individuals. 2) The presence of blastomycosis and other fungus diseases in the dog population of Arkansas; also provided lectures and periods of instruction for medical students, pharmacy students, microbiology sections, physicians, veterinarians and interested civic groups on the disease of animals transmissible to man.

Tuberculosis Control

During 1961 the Division of Tuberculosis Control continued its program of case detection through the Mobile Survey Units and specific nursing activities and maintained a Central Registry of all known cases of tuberculosis and tuberculosis suspects. At the 1961 meeting of the State Legislature, Act 275 was passed providing additional funds earmarked for expanding the tuberculosis program to provide diagnostic and supervisory out-patient chest clinics in areas of high incidence throughout the State.

During the last six months of 1961 an analysis was made of the tuberculosis problem in many areas of the State. Certainly the main problems confronting us are adequate evaluation of contacts to known cases and other suspects and thorough treatment of proven cases.

We can be optimistic about tuberculosis control in Arkansas if known principles of diagnosis and treatment are applied on a broad scale. Every effort to provide a consulting service to individual physicians and health departments throughout the State to help in this endeavor is being made.

Venereal Disease Control

Calendar year 1961 showed an increase in primary and secondary syphilis of thirty per cent over 1960, thus making the fifth consecutive year that early syphilis morbidity has inclined.

The State Health Department is cognizant of the vital role played by the general practitioner in the ultimate control of syphilis, as more than fifty per cent of the State's early infectious cases were reported by this group.

Personnel of the Venereal Disease Control Division have personally visited 1,032 physicians in an attempt to solicit their cooperation in methodical reporting of cases. These workers have been well received by ninety-five per cent of the physicians visited, and most physicians have agreed to accept the interviewer-investigator services offered by the department.

The Division continues to provide consultation to local health departments in carrying out programs of selective blood testing, assisting in programs of public information, and in the maintenance of records and reporting procedures.

As always, the lack of adequate diagnostic and treatment services for medically indigent patients continues to seriously curtail the efforts of the Division in effecting venereal disease control.

Maternal and Child Health

The Division personnel at the end of the year consisted of a director, consultants in pediatrics, obstetrics, nutrition, maternal and child health nursing, school health education, hearing and vision, audiology, speech pathology, speech therapy, psychologists, a medical social consultant, and clerical staff.

The Division operates a Hearing and Speech Center and a Special Project for Evaluation of Mentally Retarded Children; cooperates in a Special Project for Obstetric Education and Consultation in the University of Arkansas School of Medicine and in support of the Arkansas Council on Children and Youth.

The professional staff had major responsibility for organizing a workshop in school health and was active in

numerous other workshops, institutes, teaching conferences, college lectures and programs of community organizations, radio, and television. For the University of Arkansas Medical Center, Maternal and Child Health Division staff members organized and took part in teaching the unit on public health for second year medical students, taught in the courses in public health for senior pharmacy students and nursing students, and taught in courses in obstetrics and in pediatrics for third year medical students. They also took part in orientation of newly-employed local public health personnel.

Maternity Care

Maternity clinics were conducted by local physicians assisted by public health nurses in seventeen counties as part of the local health program for pre- and post-natal care of maternity patients, especially those expecting to use midwives. In 1960 a total of 2,534 women attended these clinics for an average of 2.63 visits each; 767 were given post-partum examination within twelve weeks after delivery. Six of the clinics were used as teaching clinics for medical students, arranged by the Special Obstetric Project as a means of familiarizing the students with public health aspects of maternity care.

Midwife Control

In nine years since regulations were passed by the State Board of Health setting up standards for obtaining permits to practice midwifery and forbidding practice without a permit, the total number of active midwives dropped from 719 to 325, the fewest ever registered in the State. These 325 reported 3,614 deliveries, 8.8 per cent of total live births in 1960, also a new low. Permits are issued annually by this Division over signature of the State Health Officer on request of local medical directors and public health nurses. All but 37 of the 325 active midwives had permits in 1960. These 37 reported 119 births. Monthly classes were held by the public health nurses in all counties with midwives. Midwives are required to attend the classes and to meet certain other requirements, including a physical examination.

A detailed record is kept by this Division on each midwife and a tabulation of all midwife deliveries is distributed annually.

Child Health

In 1960, 541 premature infants were served by public health nurses, with incubators loaned to 64 families. The nurses instruct and demonstrate to the family complete nursing care of these infants. Approximately 7 per cent of the infants born alive in the State last year were born prematurely.

A special project to study combined hospital-home-care of premature infants was set up in Jefferson County, but was just beginning operation at the end of 1961.

Well-child medical supervision was provided 4,457 children at well-child conferences in 23 counties. These were arranged by public health nurses and ordinarily held in the local units. Approximately one-half of the children examined in the conferences were under one year of age; 85 per cent were under 5.

School

A total of 651 school-age children were seen in well-child medical conferences in 1960, with an additional 10,220 given public health nursing service. Another 4,457 were examined in the school health program in areas where a health department physician was available; 1,547 of these were examined with parent present. Other school health activities included 6,917 conferences between public health nurses and teachers (4,751 on matters relative to pupils and 2,166 relative to school problems).

Schools in every county in the State have conducted hearing and vision screening programs at some time since the program was initiated in 1948. Health department personnel assist in community planning for these programs and teach and supervise volunteer workers who do the testing. This Division provided pure-tone audiometers and Massachusetts vision kits for conducting the screening tests and consultant service to local health units and schools.

In the 1960-61 school year, 76,605 were given hearing tests in fifty-four counties, with 1,377 referred for medical attention. In vision testing programs in sixty-two counties, 80,423 were screened, with 5,212 referred for medical attention.

A new wall flip-chart, "Recommended Procedures for Handling Emergency Illnesses and Accidents at School," was prepared and distributed to schools. This was reviewed by the chairman of the Committee on School Health and Physical Fitness of the Arkansas Medical Society.

Participation in two State-level joint committees continued, as did the organization and staffing of one workshop and a series of faculty institutes on health.

Nutrition Service

The Nutrition Service staff now includes one chief nutrition consultant, five district nutritionists (one is part-time), and one dietitian consultant (part-time). District nutritionists are now working in 34 counties. Services of nutritionists include consultation with local public health nurse, consultation with local physician, consultation with teachers, lunchroom workers, home demonstration agents, and work with community groups desiring nutrition information. The 1962 Arkansas Diet Manual was received, and distribution was started with copies being sent to physicians, dietitians, hospitals, nursing homes, medical students, public health nurses, and reference copies to schools of nursing and home economics. In addition to editing the Arkansas Diet Manual, the dietary consultant served as editor for the Food Service Guide for Arkansas Nursing Homes and also edited Your Patient's Tray, the newsletter for hospitals and nursing homes.

Arkansas Children's Hearing and Speech Center

It is the purpose of Arkansas Children's Hearing and Speech Center, 801 Battery, Little Rock, to offer a free speech or hearing evaluation to any Arkansas child up to 21 years of age and also to provide therapy for those children and adults who need this training.

Routine hearing and speech evaluations, using specialized techniques, are made to assist in understanding such handicaps as: aphasia, articulatory problems, cerebral palsy, cleft palate, delayed speech, hard-of-hearing, and stuttering.

This past year, the professional staff of the Hearing and Speech Center consisted of an audiologist, two speech pathologists, and a full-time and part-time speech therapist.

During 1961, 197 patients were evaluated, 187 rechecks were done, 60 counseling sessions held, and 2,369 half-hour patient therapy visits were administered to a total of 118 patients. For the State Department of Public Welfare, consultant services by the Hearing and Speech Center staff were offered at twenty-seven Crippled Children's Division clinics in Little Rock and throughout the State. Also, the staff attended 26 pediatric clinics at the University Medical Center, and an orientation program for approximately eighty medical students (in groups of eight) was given at the Hearing and Speech Center during the year. Complete audiometric evaluations were given to 98 patients of Veterans Administration.

A program for training students in the fields of speech and hearing was begun last summer at Little Rock University. In June and July, one and one-half hours daily

were devoted to the teaching of an introductory course in communication disorders. Two more courses were offered during the 1961 fall semester for a total of 86 teaching hours. Though a full complement of students was not enrolled for the courses, there was a great deal of interest aroused, and all signs point to an increase in enrollment the second semester.

Mental Retardation Project

The Arkansas Child Development Center, the State Health Department's evaluation and counseling service for children thought to be mentally retarded, provided evaluations for 271 children in 1961. Since August of 1958 only children under 7 years of age, except for a very few older children with special problems have been seen. Public Health nursing service was given to 1,073 mentally retarded children during 1960.

Studies

Information is collected routinely for reports and studies on maternal deaths, neo-natal deaths, premature births and deaths, hearing and vision screening in the schools, and midwife activities. Monthly reports of infants with malformations or birth injuries are made to the Crippled Children's Division of the State Department of Public Welfare. In 1960, 320 infants were referred.

Vital Statistics

Live births in the State continue to decline; the 41,006 registered in 1960 is the lowest since 1945 and nearly 7,000 below the peak year of 1949.

Infant deaths increased. 1,036 infants under one year of age died in 1960, for a rate of 25.8 per thousand live births, an increase of 2.0 per thousand from the preceding year.

Prematurity continues as the leading cause of infant death.

A total of 27 maternal deaths occurred in 1960, for a rate of 6.5 per ten thousand live births. Provisional figures for the United States indicate a rate of 3.2 per 10,000 live births for the same year.

Heart Disease Control

The cooperative efforts of the State Health Department, the Arkansas Heart Association, the Department of Cardiology of the University of Arkansas School of Medicine, and several civic organizations and communities during 1961 were directed towards public education, improved community services, and physician education in the overall heart disease control program. Physicians and the general public are becoming more interested in the rapid expansion of the research effort, improved diagnosis and treatment, and the eventual decline in the annual number of disabilities and premature deaths caused by cardiovascular diseases and disabling abnormalities of the heart and blood vessels.

Public clinic facilities for diagnosis and treatment are limited. However, the clinic located at the University of Arkansas School of Medicine is operating at full capacity. Referrals are effected by physicians and local health units throughout the State. During the twelve-month period, approximately 6,000 individuals were examined in the clinics; of this number approximately 1,000 were found to have cardiovascular disease and received treatment. It is estimated that 16 per cent of all referrals have some type of cardiovascular disease or condition that can be improved or cured. This fact alone justifies further expansion of clinical services and public and physician education.

This Division continues to provide financial assistance to clinics, provide approved pamphlets, films, and other educational materials to interested organizations and au-

thorized agencies for distribution and teaching purposes in the educational phase of the program for both lay and professional groups.

Mental Hygiene

During the year the Division continued its financial aid and support to the adult and child psychiatric clinic at the University of Arkansas School of Medicine and the Family and Child Guidance Clinic at Ft. Smith, Arkansas.

The Division cooperated and participated in the local and State-wide Parent-Teacher Association program emphasizing mental health during the year. Public education in the area of mental health was a major activity. An indication of the efforts in this direction has been the increased interest in and the community support of the Ft. Smith and Pulaski County clinics and the interest for a clinic in the Pine Bluff area.

The Division purchased many excellent mental health films and pamphlets for distribution. These educational aids are in great demand throughout the State.

During the 1961 General Assembly a bill was presented which would make State funds available to the Division for greater support and assistance to local communities in the establishment of mental health facilities. The bill failed to become an Act. This means that needed basic assistance to local communities will not be available except for the inadequate federal grant-in-aid funds. The success of the Ft. Smith clinic strongly indicates that once a facility is established and proves its worth, the community will accept and support the facility. The philosophy of the Division continues to be one of believing that the major support and direction of mental health programs should come from local communities rather than from the State or federal government. However, most areas will require some state and federal assistance to begin their programs that can eventually hope to meet the very large number of mental health problems that exist in any area of the State.

Public Health Nursing

The Division of Public Health Nursing has worked with the other Divisions in planning and supervising the activities of the local staff nurses in order to offer the best generalized service possible with existing personnel and facilities.

There are now 132 public health nurses employed in local health units and the Central Office. At present there are eleven counties without nursing service. Forty-three counties have only one public health nurse while twenty-one counties have two or more public health nurses.

There were 88,992 home and office visits made by the public health nurses, 194,028 immunizations were completed, and 23,480 people were seen in clinic situations.

There are 23,318 families listed in the public health nurses' case load. The nurses attended workshops on tuberculosis, sight conservation, heart conditions, 461 visits were made to the county health units by the nursing supervisors and consultants. The usual in-service conferences were held. The topic for discussion this year was maternal and child health problems.

The Director of the Division of Public Health Nursing worked with the Director of the Bureau of Local Health Service and the staff in Ouachita County conducting a survey to establish the need for nursing care in the home for chronically ill and aged, then in developing a plan for a pilot project to offer this service starting in the fall of 1961.

Dental Health

Through efforts of the State Health Officer and the Arkansas State Dental Association, the State Legislature

provided, for the first time, special funds for the financing of the Arkansas state dental public health program, which at this time is supported exclusively by State funds.

The active State dental public health program has been enlarged by the addition of new program activities (research). Existing activities (education, prevention, care) have been expanded.

The State dental public health program needs further expansion in all dental public health areas (research, education, prevention, and care) for the elevation of the dental health standard of the population of Arkansas.

Sanitary Engineering

Water works systems were constructed at Ratcliff, West Fork, and Horseshoe Lake. New water plants were constructed at Des Arc, Altheimer, Manila, Charleston, Sheridan, and Morrilton.

Sewerage systems and treatment plants were constructed at Elaine, Altheimer, and Marmaduke. New sewage treatment plants were constructed at DeQueen, El Dorado, Des Arc, Danville, Charleston, Smackover, and Springdale.

A total of 556 sets of plans for water, sewerage, swimming pools, and miscellaneous sanitary improvements were approved during this year. The cost of these improvements is estimated at \$14,000,000.

The Division of Water and Sewage Control now has under supervision 245 public water systems that serve a population of 895,000; 147 sewerage systems that serve 825,000; and 257 swimming pools.

Licenses were issued to 558 water works operators in accordance with Act 333 of 1957.

Plumbing Division reports 13 communities adopting plumbing codes during the year and the licensing of 1,047 master plumbers, 940 journeymen plumbers, and 282 apprentice plumbers.

Food and Drug Division found 148 tons of food, drugs, and cosmetics to be misbranded, adulterated, or otherwise in violation of the Arkansas Food and Drug Laws.

Two food poisoning outbreaks were investigated during the year, and 14 court cases were consummated; six for the violation of State Drug Laws and eight pertaining to food violations.

With the passage of Acts 415, 416, 417, 418, and 419, large amounts of time and work were necessary to set up the necessary record-keeping so that all narcotic registrants in the State were compiled to receive the regulations and necessary material.

The State Board of Health promulgated new Meat and Meat Products Regulations during the year, and many laboratory samples were analyzed to bring the meat industry into compliance with the regulations.

Eleven narcotic addicts were apprehended during the year, and six of those apprehended voluntarily entered a Federal Narcotic Treatment Center.

The laboratory also examined 295 samples of food and drugs, with 1,808 determinations being made on the samples.

The Division of Dairy Products completed 986 sanitary inspections, issued 1,032 licenses, rejected 23,323 pounds of milk because of sediment, rejected 2,914 pounds of milk because of water, and in general made progress toward considerable improvement in the Arkansas milk supply.

Laboratories

The Bureau of Laboratories offers direct diagnostic services to private physicians and hospitals as well as services related to the programs of other Divisions of the State Health Department. All of these services amount to approximately 300,000 examinations of various types each year.

Diagnostic services offered to physicians are limited to those having public health significance and consist mainly of tests for venereal diseases, tuberculosis, enteric fevers, intestinal parasites, and other communicable diseases of bacterial origin. Specimens are received from physicians throughout the State and positive findings often give important information of public health significance by indicating the type, amount, and location of certain communicable diseases. Epidemiological investigation and preventive measures can then be taken in time to prevent serious outbreaks.

In cases of suspected diphtheria and typhoid fever, physicians can give valuable help by sending us suitable material for cultures before treatment is given. All isolations of diphtheria organisms are typed and the virulence determined. All isolations of *Salmonella typhi* are phage typed. It is known that healthy carriers play a large part in the spread of these two diseases in our State, but any attempt to relate carrier to case is handicapped if no causative agent has been isolated from the sick patient. If the diagnosis has been bacteriologically confirmed by a private or hospital laboratory, the physician is in a position to request that the culture be saved and sent to us for typing before it has been discarded.

The Virus Laboratory of the U. S. Public Health Service Communicable Disease Center has found it necessary this year to limit drastically the amount of diagnostic material that may be referred to them. Paired sera may still be referred for complement-fixation tests if the suspected disease is one for which such tests are practical, but stool specimens for virus isolation may be referred only from cases of *paralytic* polio. Serologic tests for fungus and rickettsial diseases as well as leptospirosis are also still available.

Our laboratory records for the year show a definite increase in the number of isolations of *Shigella* (bacillary dysentery). *Salmonella typhi* accounted for more than half of all the *Salmonella* found. Of the other types, *Salmonella typhimurium* was the most common.

Of 259 intestinal parasites found, hookworm accounted for 18, roundworm 15, pinworm 13, dwarf tapeworm 11, *Giardia lamblia* 41, *Endamoeba coli* 52, *Endolimax nana* 50, *Endamoeba histolytica* 13, *Endamoeba hartmanni* 21, and miscellaneous 25. *Endamoeba hartmanni* was formerly known as the small race of *Endamoeba histolytica* and is now thought to be nonpathogenic or only mildly so. Included in the miscellaneous parasites found were worm segments and ova from a patient with beef tapeworm (*Taenia saginata*). Intensive treatment resulted in the recovery of a tapeworm measuring 6 feet 8 inches. The head and neck of the worm were present.

More than 10,000 sputums were received in the tuberculosis laboratory with an increase in positive findings. Over 100 cultures were positive for acid fast bacilli which were not typical of the tubercle bacillus. These atypical organisms are not virulent for laboratory animals but may or may not cause infection in man.

Both the number of smears and the number of positive findings for gonorrhea increased. Tests for syphilis continued to decline. The number of private laboratories presently approved for the performance of premarital and prenatal blood tests is 107. Of these, 101 are approved for the VDRL test. Premarital blood tests for syphilis performed by all approved laboratories showed approximately 1.4 per cent to be reactive and 1.6 per cent to be weakly reactive.

In the Chemistry Division, emphasis was placed on radiological defense activities and the analysis of products from the meat packing industries.

About 500 persons were trained in radiological defense monitoring of air, food, and water. This Division has also

continued to operate sampling stations for the U. S. Public Health Service. Air samples are collected for the Community Air Pollution Program and air and rain samples for the National Surveillance Network. Radioactive fallout during the first part of the year was down to pre-1957 levels and was not detectable in air, water, or rain until after the resumption of atmospheric nuclear weapons testing.

Cooked sausage products from all in-State meat packers were sampled and tested. Violative samples decreased from 44 per cent to 15 per cent as all packers were assisted in making their products meet the cooked sausage regulations.

Fluoridated water supplies were checked for fluoride content at regular intervals, and chemical analyses of all public water supplies were completed. Gross radiation counts on all public water supplies were also recorded as a baseline for detecting future increases due to peaceful or non-peaceful radioactive contamination.

Civil Defense and Radiological Defense Services

In the field of civil defense, the State Health Department participated in a training school sponsored by the American Medical Association on Health Mobilization Planning in Minneapolis, Minnesota, and Chicago, Illinois.

Assistance was provided the State Civil Defense and Disaster Relief Agency with instructors and students during a course on disaster preparedness for the various State agencies. The same course was then given to all individuals in the State Health Department Central Office. Attendance in this course of instruction was arranged in such a manner that 50 per cent of the personnel attended on separate occasions which enabled the Department to carry on the normal work load insofar as possible.

A full complement and staff of the various disciplines in the State Health Department participated in "Operation Alert 1961". This problem was a training exercise developed and operated by the State Civil Defense and Disaster Relief Agency at Conway, Arkansas.

A sizable portion of the program presented at the annual Arkansas Public Health Association meeting was devoted to health mobilization and emergency planning. The Liaison Officer for Civil Defense of the State Health Department arranged for nationally known speakers to speak on appropriate subjects relative to the role of the State Health Department in the event of a national disaster or nuclear war.

Advice and consultation were provided the State Civil Defense Agency relative to the location and storage of 17 civil defense emergency hospitals at strategic points in Arkansas. An article was prepared and distributed to professional groups explaining the composition, organization, and use of this emergency hospital. Demonstrations of the use of the hospital are coordinated and supervised by the Hospital Division of the State Health Department.

Action is being taken to participate in the medical self-help training program which is designed to instruct one person in each family on basic medical skills under the supervision of physicians, allied medical and health personnel, and especially trained lay instructors.

The demands and needs in the area of civil defense as it pertains to the State Health Department are greatly increasing. To date these requirements have been met with existing personnel and without budget support. However, it is very doubtful that such a situation can continue if the demands and needs keep growing.

The radiological defense services during this year trained a total of 415 persons in radiological defense and monitoring. The breakdown of personnel trained in the series of 16-hour courses is as follows:

| | |
|---|------|
| State Health Department | 200 |
| Federal Soil Conservation Service | 140 |
| Federal Highway Bureau | 25 |
| Heads of State Agencies | 50 |
| | ---- |
| Total | 415 |

The radiological defense service received 33 kits of training instruments composed of 33 Geiger counters, 64 ionization chambers, 64 pocket dosimeters. The use of these instruments enable the radiological defense services to train

sufficient personnel to establish 49 monitoring stations in the State at local health departments.

At the present time there are approximately 275 sets of instruments under RADEF (radiological defense) control. This amounts to 1,375 individual instruments, and there are no provisions for maintenance and upkeep on them. The radiological defense program has grown so fast that it is not possible to give this service enough time and attention as is necessary. It is strongly urged that a full-time person be employed to assist in carrying out the duties of this service.

MEDICINE IN THE



THE MONTH IN WASHINGTON

Washington, D. C. — Reports by the American Medical Association and the Health, Education and Welfare Department showed that 38 states have taken advantage of the Kerr-Mills law providing medical care for the aged with a total expenditure of \$121 million in the first 15 months of the program.

Citing the program's wide acceptance, Dr. Leonard W. Larson, president of the A.M.A., said that 27 states had enacted Kerr-Mills Medical Assistance to the Aged (MAA) programs and 11 other states had expanded Old Age Assistance (OAA) medical benefits under the new law.

In addition, he said, nine states already had OAA medical programs on the books and in most instances they are considered to be adequate to provide the necessary health care for those over 65.

Two of the three remaining states — Arizona, and Delaware — have excellent assistance programs at the local level which include medical care, Dr. Larson said.

"These figures certainly contradict statements by Kerr-Mills critics who say that the program can't and won't work," Dr. Larson said.

"In just 15 short months Kerr-Mills has been widely accepted across the land and with each passing day is proving that it can, and if given the fullest opportunity, will do the job.

"Kerr-Mills is being implemented by the states as fast, if not faster, than any previous federal-state matching program.

"Such rapid acceptance of this principle makes any compulsory health program through the social security mechanism totally unnecessary."

A variety of new approaches to better care for the chronically ill and aged will be made possible through the Community Services and Facilities Act of 1961, HEW said. The Act authorizes grants to community agencies to develop new and im-

proved home nursing, home care, and other out-of-hospital services. The Act also raises the ceiling for grants to the states for the construction of nursing homes from \$10 million to \$20 million annually.

Under the Hill-Burton program, 535 hospitals, nursing homes, rehabilitation centers, and other facilities were awarded \$146,330,000 in Federal funds toward \$468,661,000 of construction in 1961.

Manufacturers accepted a congressional proposal for further government controls over the efficacy of prescription drugs, but stood pat in opposing patent provisions of the controversial drug legislation sponsored by Sen. Estes Kefauver (D., Tenn.).

Eugene N. Beesley, chairman of the board of the Pharmaceutical Manufacturers Association, said that the PMA "fully endorses the principle that a drug should be effective for the uses that a manufacturer claims for it; and, second, that the Food and Drug Administration, in passing on new drug applications to determine the safety of the new product, already evaluates — in many cases, — the evidence of its effectiveness for the uses claimed."

"Since FDA has expressed a desire to have its authority clarified with respect to its consideration of the effectiveness as well as the safety of new drugs, we wish to support the proposal as we understand it," he added.

Beesley said such FDA clearance "would assure physicians that a drug effectively produces certain physiological actions; but the physician, not the FDA, would determine whether these specific physiological effects would be useful or beneficial with respect to particular patients."

Beesley said the patent restrictions proposed in the bill "would virtually destroy the patent system with respect to medicines."

"This proposal obviously strikes directly and crucially at the industry's capacity and incentive for discovery of new and improved medicines, and we vigorously oppose it," he said.

Kefauver indicated he might compromise on the patent provision, saying that he was "not irrevocably wedded to the precise approach" of his legislation.

Kefauver endorsed A.M.A.'s expanded drug information program which will put the data directly in the hands of prescribing physicians in contrast to new FDA regulations which place the emphasis on distribution of new drug information to pharmacists.

"The PMA is supporting and, I trust, will continue to support the new and broadened program it has established with the American Medical Association of disseminating to physicians better and more accurate information concerning the bad as well as the good features of drugs," Kefauver said.

"And it is supporting, and again I trust will continue to support, the new program of the U. S. Pharmacopoeia and the A.M.A. in establishing simpler and more usable generic names for drugs.

"These are important steps forward."

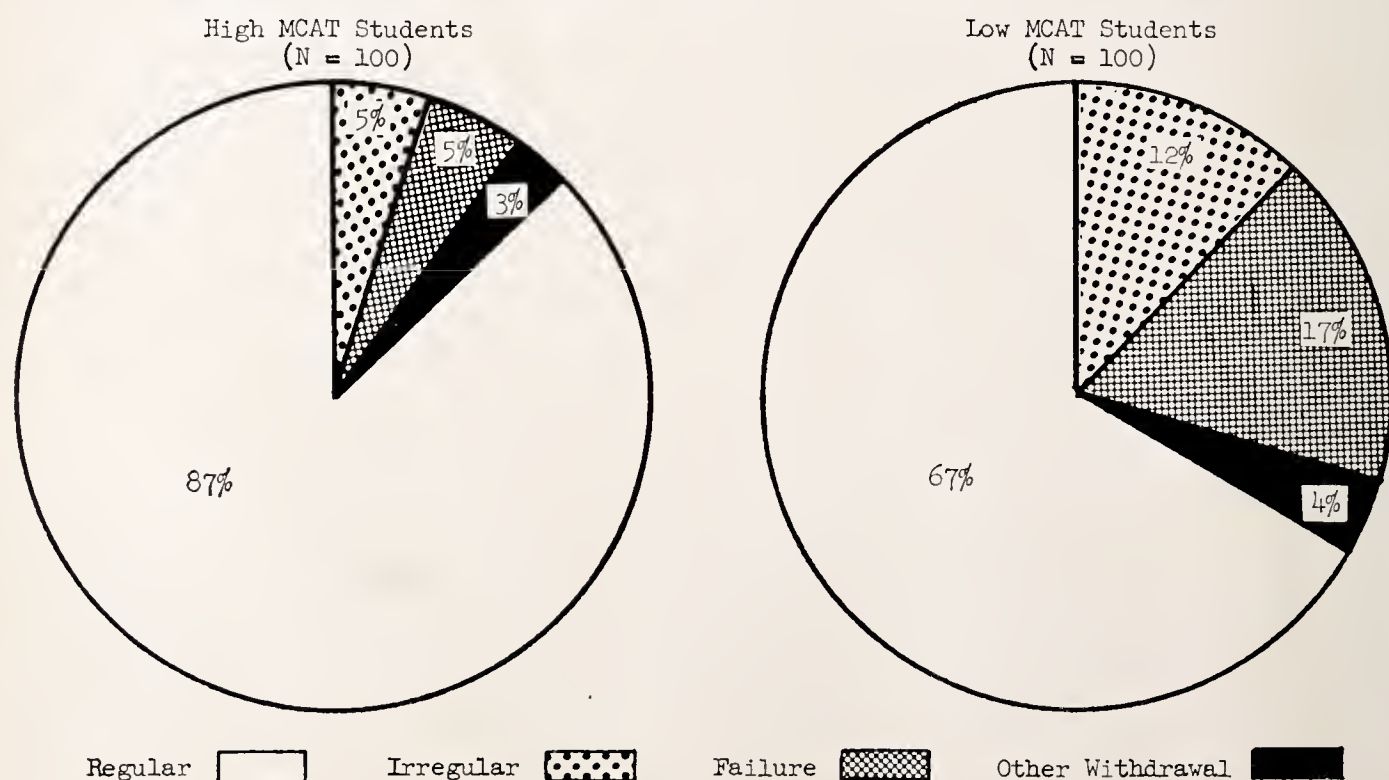
MEDICAL SCHOOL PERFORMANCE OF HIGH AND LOW MCAT STUDENTS

Each year a number of students are admitted to medical school in spite of low scores on the Verbal and Quantitative Ability sections of the Medical College Admission Test. It is important for members of admissions committees to know how such students perform in medical school as compared with students who score high on these measures.

To explore this question two groups of 1956 entering first-year medical students who differed widely on the Verbal and Quantitative sections of the MCAT were compared on the basis of their medical school accomplishment records. One group contained the 100 students with the highest average Verbal + Quantitative Ability scores in the entire 1956 entering class; the other contained the 100 students with the lowest Verbal + Quantitative scores. The mean Verbal + Quantitative scores for these two groups were 688 and 329 respectively.

Figure 1 shows the proportion of each group who finished medical school in four years or less (regulars), the proportion whose progress was delayed and who were still in medical school

FIGURE 1.
MEDICAL SCHOOL PROGRESS OF HIGH AND LOW MCAT STUDENTS



during the 1960-61 academic year (irregulars), the proportion who withdrew because of actual or impending academic failure, and the proportion who withdrew for other reasons.

Almost 9 out of 10 students in the high MCAT group (87%) made regular progress, and only about 1 in 20 failed out of medical school. Only about two-thirds of the low group, however, made regular progress and about 1 out of 6 was an academic failure. Withdrawals for reasons other than failure accounted for 3 to 4 per cent of the students in both groups. Clearly, the high MCAT student is more likely to make regular progress in medical school and less likely to fail than his low MCAT classmate.

The positive relationship between performance on the Verbal and Quantitative sections of the MCAT and performance in medical school is also reflected in medical school grades. The proportion of each group falling into the upper, middle, and lower thirds of their first- and third-year classes are shown in Figure 2. Only those students whose progress was regular and who

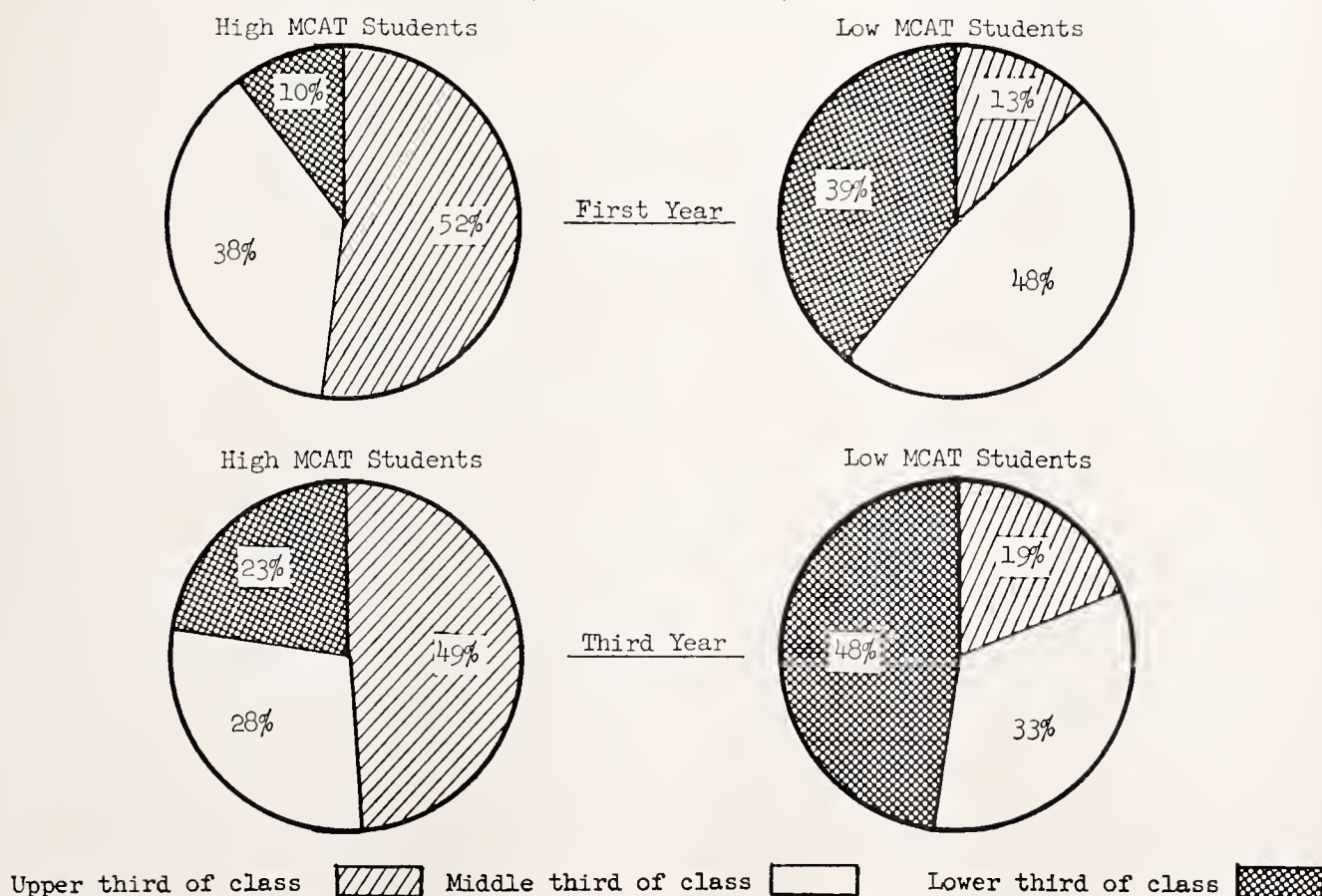
were graded by their medical schools were included in this analysis.

Over half (52%) of the high MCAT students were in the upper third of their first-year classes, and only 1 out of 10 fell into the lower third. Among the low MCAT group, however, only 13 per cent were in the upper third of their first-year classes, and almost 4 out of 10 (39%) fell into the lower third.

Similar results were obtained when the two groups were compared on the basis of third-year grades. Again the high MCAT students were more likely to be in the upper third of their classes and less likely to be in the lower third than students in the low MCAT group.

Even though these analyses generally show a positive relationship between MCAT level and performance in medical school, two important considerations should be kept in mind in interpreting these results. First, this study was exploratory in nature and limited itself to small groups at the extreme ends of the MCAT scale. Obviously, many medical schools were not represented in

FIGURE 2.
FIRST AND THIRD YEAR ACCOMPLISHMENT OF HIGH AND LOW MCAT STUDENTS
(REGULARS ONLY)



either of the groups studied here. The relationship between MCAT level and performance in an individual school might be quite different from the relationship found in this study.

Second, a number of students in the low group not only made regular progress through medical school, but also made excellent grades while in school. An intensive study of low MCAT students is currently being conducted, and initial results indicate that a combination of drive level plus certain patterns of personality characteristics may be important in discriminating between low MCAT students who do well academically and low MCAT students who fail. Conversely, some students in the high MCAT group failed out of medical school or barely managed to graduate. This group is also being studied further in an effort to determine why some apparently "talented" students have difficulty in medical school or are permanently lost through academic failure.

This preliminary investigation tends to confirm the validity of the MCAT as a selection instrument, but it also suggests that a number of other dimensions must be considered in attempting to predict the performance of a prospective medical student.

* Submitted by the Division of Basic Research of the AAMC, 2530 Ridge Avenue, Evanston, Illinois.

Plastic Surgeon Speaks at Fayetteville Meeting

Dr. Anthony DePalma, plastic surgeon spoke at the January Meeting of the Northwest Arkansas Mental Health Association. Dr. DePalma presented an illustrated lecture entitled "Plastic Surgery and Its Relation to Mental Health."

A graduate of the University of Arkansas School of Medicine in 1949, Dr. DePalma interned at Shreveport Charity Hospital in Shreveport, La. He then returned to Fayetteville where he engaged in general practice of medicine for 3 years. A residency in general surgery followed at Cottage Hospital in Santa Barbara, California. During the next three years Dr. DePalma received his plastic surgery training at Baylor University College of Medicine in Houston, Texas. He is the author of several professional papers on plastic surgery.

A past president of the Mental Health Association, Dr. DePalma is now serving as district vice-president of the state mental health association, under Mrs. Winthrop Rockefeller, president.

Chilean Doctor Is Visitor in Lee County

Dr. W. A. Munos, an obstetrician from the University of Concepcion, Chile, was a visitor in Lee County recently. He is in the United States observing how obstetrics is taught to Medical Students and how this teaching is related to preventive medicine.

He, along with his wife and four children, arrived in this country in March, 1961. They spent time in Washington, D. C., in Baltimore, in Chicago, and in Cleveland, before arriving in Arkansas. They will also go to Texas and Mexico for sightseeing trips before returning to Chile.

In Arkansas Dr. Munos concentrated his study on maternal welfare. While in Lee County, he observed a meeting of the midwives in the county whose activities are supervised by Mrs. Hellen Whitworth, nurse with the Lee County Health Unit. In Chile, he said there are midwives in the small towns and rural areas, but they have no supervision and really operate outside the law.

"We have found a big difference between the North and the South in the United States," Dr. Munos stated. "The people here in the South are much friendlier." "We have learned many things in your country," Dr. Munos concluded. "It has been a pleasant and rewarding trip."

Dr. Monfort Gets Appointment

Dr. J. J. Monfort, Immediate Past President of the Arkansas Medical Society has been appointed a member of the Board of Directors of the American Medical Political Action Committee.

THINGS



TO

COME

Clinical Symposium to Be Held in Houston

The University of Texas Postgraduate School of Medicine and The University of Texas M. D. Anderson Hospital and Tumor Institute will co-sponsor a Clinical Symposium on "The Management of Children with Cancer," in Houston, Texas on March 30, 31, 1962. The program will be held in the Main Auditorium of the University

of Texas M. D. Anderson Hospital and Tumor Institute. Various aspects of the management of important pediatric neoplastic diseases will be discussed. As part of the program, a panel discussion with presentation of cases that illustrate specific clinical problems is scheduled.

Guest speakers will include:

Dr. M. Lois Murphy, New York (Problems in Treatment of Leukemia and Lymphoma in Children)

Dr. Emil J. Freireich, Washington, D. C. (Platelet and Granulocyte Replacement Transfusion Therapy)

Dr. H. William Clatworthy, Jr., Columbus, Ohio (Liver Neoplasma in Infancy and Childhood)

Dr. G. J. D'Angio, Boston (Radiotherapeutic Considerations in Management of Children with Malignant Diseases)

Dr. Lois Collins, Houston (Roentgenographic Problems in Tumors of Children)

Dr. John S. Stehlin, Jr., Houston (Regional Chemotherapy in Childhood Malignancies).

Annual Spring Meeting of West Virginia Academy of Ophthalmology and Otolaryngology

The West Virginia Academy of Ophthalmology and Otolaryngology announces that its Fifteenth Annual Spring meeting will be held April 23, 24, 25, 1962 at the Greenbrier Hotel, White Sulphur Springs, West Virginia with the following guest speakers in attendance:

1. Ramon Castroviejo, M.D.,—New York City.
2. Frank Costenbader, M.D., — Washington, D. C.
3. Kelvin A. Kasper, M.D., — Philadelphia, Pennsylvania.
4. Frederick Guilford, M.D.,—Houston, Texas.

Also Mr. Philip Salvatori of Oberg Laboratories will present an entire afternoon session devoted to "Advanced Techniques in Contact Lens Fitting (Aphakie, Keratocoues, etc.)"

There will be a registration fee of \$25.00. For any additional information, please contact the secretary, Dr. Worthy W. McKinney, 109 East Main Street, Beckley, West Virginia.

Sixth Postgraduate Course on Fractures and Trauma to Be Held in Chicago, April 25, 26, 27, and 28, 1962

The Sixth Postgraduate Course on Fractures and Other Trauma sponsored by the Chicago Committee on Trauma of the American College of Surgeons will be held April 25, 26, 27, and 28, 1962, at the John B. Murphy Memorial Auditorium, 50 East Erie Street, Chicago, Illinois.

This three and one-half day course is dedicated to the late Dr. Philip Lewin, renowned orthopaedic surgeon of Chicago. He cooperated for many years in the efforts of the Chicago Committee on Trauma and was one of the founders of the American Academy of Orthopaedic Surgeons. He was the author of numerous publications and many textbooks related to his specialty, and at one time was professor and chairman of the Department of Orthopaedic Surgery at Northwestern University.

Guest speakers from outside Chicago include Otto E. Aufranc, Boston; Herbert F. Moseley, Montreal; Frank Stinchfield, New York; Fred C. Reynolds, St. Louis; Alexander P. Aitken, Boston; Truman G. Blocker, Galveston; William H. Bickel, Rochester, Minn.; and William L. White, Pittsburgh.

Dr. Sam W. Banks is Chairman of the Chicago Committee on Trauma of the American College of Surgeons, Dr. J. D. Farrington is Secretary-Treasurer, and Dr. John J. Fahey is Chairman of the Committee on Postgraduate Course on Fractures and Other Trauma of the Chicago Committee on Trauma. Inquiries should be addressed to Dr. Fahey at 1791 West Howard Street, Chicago 26, Illinois.



OBITUARY

Texarkana Physician Dies

DR. GEORGE W. PARSON, 64, prominent Texarkana physician, was found in Grassy Lake near Fulton, Arkansas. The death was due to drowning. Dr. Parson was born in Stony Creek, Va., on November 4, 1897. He attended the College of

William and Mary where he received the Chancellor and Graves Scholarships — Two of the highest scholarships awarded to undergraduates. He received his M.D. Degree from the Medical College of Virginia in 1922, and served his internship at Grace Hospital, Richmond, Va.

Dr. Parson was engaged in the private practice of medicine in Virginia from 1922 to 1926. From 1926 to 1929, he was a Fellow in Medicine, Mayo Foundation, and received an M.S. Degree in medicine from the Mayo Foundation, a branch of the University of Minnesota, in 1929.

He was head of the Department of Internal

Medicine at Southern Clinic in Texarkana from 1930 until his retirement. Dr. Parson had contributed a great number of articles to medical publications. He was a Diplomate of the American Board of Internal Medicine; a member of the American College of Physicians, American Medical Association, Southern Medical Association, Texas Club of Internists, Texas Academy of Internal Medicine, American Heart Association, Tri-State Medical Assembly, Resident and Ex-Resident of Mayo Clinic, Texas State Medical Association, Arkansas Medical Society, Bowie and Miller County Medical Societies, and was past president of the Texas Heart Association.



PERSONAL AND NEWS ITEMS

Doctor Gets Grant for Baby Study

Dr. M. R. Wirthlin, Jefferson County health director, is scheduled to receive a \$75,000 grant from the Department of Health, Education and Welfare to make a study of premature babies. The funds will be doled out in \$25,000 installments during the next three years by the HEW and the State Health Department.

Dr. Wirthlin pointed out that one of the main studies would be devoted to the possibility of releasing premature babies from hospitals before they reach the weight of 5 pounds, a determining factor used by most hospitals over the country.

Dr. Wirthlin and Dr. T. E. Townsend, a Pine Bluff pediatrician, have been conducting research in Little Rock in cooperation with the Jefferson Hospital. Dr. Wirthlin said that some of the money will be used to purchase respiratory and demonstration equipment for the hospital, and a registered nurse and three practical nurses will be added at the hospital. The county Health Department will add a registered nurse and stenographer.

Dr. James Takes Hospital Post

Dr. David H. James, Jr., practicing medicine at West Memphis since 1956, has discontinued his private practice to join the staff of St. Jude Foundation Hospital. As a member of the staff of St. Jude, he is devoting his time to research work in leukemia and allied blood diseases.

Dr. James and his family are continuing to make their home at West Memphis. A native of Memphis, Dr. James was graduated from Christian Brothers College in Memphis. He received his bachelor of arts degree and medical degree from Vanderbilt University. Dr. James served his internship at John Gaston Hospital in Memphis and did graduate study in pediatrics at St. Louis Children's Hospital.

He holds a certificate of the American Board of Pediatrics and is a fellow in the American Academy of Pediatrics.

Dr. Orval Riggs Is Named Diplomate

Dr. Orval E. Riggs, of Jonesboro, formerly of Walnut Ridge has completed all requirements

for certification as a Diplomate of the American Board of Surgery. In order to become a diplomate, the surgeon must have completed at least four years in special training in surgery, subsequent to internship and including one year as chief resident in a hospital program approved by the Council on Medical Education and Hospitals of the American Board of Surgery.

Dr. Jackson Elected Chief of Staff at Bates

Dr. J. L. Jackson was elected chief of staff for 1962 by the medical staff of Bates Memorial Hospital. It was announced by Hugh Means, administrator. The position was held by the late Dr. R. M. Atkinson until his recent death.

Dr. Edmondson to Head Hospital Staff

Dr. Charles Edmondson, Springdale physician, has been elected chief of staff of the Springdale Memorial Hospital for 1962. Other officers of the hospital staff are Dr. Joe Parker, vice-chief, and Dr. James Greenhaw, secretary-treasurer.

Dr. Edmondson has also been elected secretary of the Washington County Medical Society for 1962. Other officers are Wendell Ward of Fayetteville, president, and Thomas Gray, vice-president.

Dr. Harville Accepts Medical Center Post

Dr. William E. Harville, well known Crossett physician, has accepted an appointment as resident to the Department of Pathology at the University of Arkansas Medical Center. Dr. Harville who is a native of Crossett, has practiced medicine there for the past 9½ years. He has served as a member of the Crossett School Board for the past three years and was Crossett's Outstanding Young Man of the Year for 1960.

West Memphis Medical Groups Elect Officers

Dr. Glenn Shoettle, West Memphis surgeon, has been elected as president of the Crittenden Memorial Hospital medical staff and Dr. Milton Lubin, Turrell physician, as president of the Crittenden County Medical Society. The elections took place at a joint dinner meeting of the groups at the local hospital cafeteria.

Other hospital staff officers for 1962 are Dr. T. Murray Ferguson of West Memphis, vice chairman and Dr. W. J. Wright of Earle, secretary. Dr. M. D. Deneke of West Memphis has served as staff president of the past two years.

Also elected by the medical society were Dr. Bedford Smith of West Memphis, vice president, and Dr. James R. Fall of West Memphis, secretary-treasurer. Dr. Deneke also served as president of the society for 1961.

ANSWER — ELECTROCARDIOGRAM OF THE MONTH

RATE: 110 RHYTHM: Sinus tachycardia
PR: .14 sec. QRS: .07 sec. QT: 30 sec.

INTERPRETATION: Abnormal. Increased rate. One PVC. Significant Q in I, aVL, V2, 3, 4, 5. Marked abnormal elevation of RS-T in I, aVL, V2, 3, 4, 5, with reciprocal depression in all other leads. Sinus tachycardia, acute transmural anterior (antero-septal) myocardial infarction.

COMMENT:

This elderly patient was first seen approximately one hour after the onset of chest pain. He was hospitalized and serial electrocardiograms, as well as other tests, confirmed the diagnosis of myocardial infarction. The tracing is interesting in view of the marked injury current reflected in the S-T elevations in the anterior chest leads. This usually suggests that infarction has very recently occurred and in this instance the S-T changes were much less marked, as to be expected, 24 hours later. At that time significant Q waves were evident in leads reflecting the anterior wall of the heart.



PROCEEDINGS OF SOCIETIES

Medical Assistants Honor Mrs. Kerby

Mrs. John C. Kerby of Little Rock was named the Medical Assistant of the Year, 1961, at the annual installation dinner of the Pulaski County Medical Assistants Society. Mrs. Kerby, who is secretary for Dr. Frank Padberg, was elected for her work as chairman of the society's medical education committee. The award is given yearly to the medical assistant who has contributed most to the Society's work. She was elected by the Society's 50 members.

Officers of Medical Assistants Society

The new officers of the Jefferson County Medical Assistants Society are:

| | |
|----------------------|----------------------|
| President | Mrs. J. H. Wilkerson |
| Vice-President | Mrs. G. R. Koen |
| Secretary | Mrs. George Graham |
| Treasurer | Sammie Stanley |
| Historian | Mrs. A. L. Greenwood |

Garland Medical Society Elects

Dr. Thomas E. Burrow

Dr. Thomas E. Burrow was elected president of the Garland County Medical Society at a meeting at the Velda Rose. He succeeds Dr. Carl R. Parkerson.

Other newly elected officers include Dr. W. O. Arnold, vice-president, and Dr. James French, secretary-treasurer.

Dr. Bradley Heads Medical Society

Dr. A. M. Bradley was re-elected president of the St. Francis County Medical Society. Other officers re-elected were Dr. G. A. Sexton, vice president, and Dr. George McPhail, delegate, Dr. C. E. Crawley was elected secretary-treasurer to succeed Dr. A. F. Barr who resigned after five years at that post.

Dr. Guenther Named to Head Medical Society

Dr. John F. Guenther was elected president of the Baxter County Medical Society. The group met at the home of Dr. Ben N. Saltzman in Mountain Home.

Dr. James C. Dunbar was elected vice president and Dr. Saltzman was re-elected secretary. The society voted to support any movement promoting the use of seat belts in motor vehicles as a safety measure. The members also approved a contribution to the Ninth Councillor District Medical Society, for work toward improved programs in medicine, and discussed other medical matters.

County Society Proceedings

The Craighead-Poinsett County Medical Society met January 17th at the Jonesboro Country Club. Dr. Donald T. Niblett, Jonesboro, speaker for the evening, discussed "Blood Coagulation."



BOOK REVIEWS

A SYNOPSIS OF CONTEMPORARY PSYCHIATRY. Second Edition. By George A. Ulett, B.A., M.S., Ph. D., M.D. Professor of Psychiatry, Department of Psychiatry and Neurology, Washington University School of Medicine, St. Louis, Mo.; Director of Psychiatric Services, Hospital Division, City of St. Louis, St. Louis, Mo.; Medical Director, Malcolm Bliss Mental Health Center, St. Louis, Mo., and D. Wells Goodrich, M.D., Chief Biosocial Growth Center, National Institute of Mental Health, National Institutes of Health, United States Public Health Service, Department of Health, Education and Welfare, Bethesda, Md. Published by The C. V. Mosby Co., St. Louis, 1960.

This very short handbook of psychiatry is of questionable value to anyone. It really attempts to introduce the medical student to psychiatry, using a book he can carry in his pocket. This is a rather dubious technique and the reviewer honestly feels this book has no niche among current text books. The book does contain some discussion of the chemotherapy of mental illness and other therapeutic measures used in the treatment of psychiatry. The book deals with other facets of psychiatry but the discussions are necessarily extremely brief. This book is not recommended.

AK

MANAGEMENT OF HYPERTENSIVE DISEASES, by Joseph C. Edwards, A.B., M.D., F.A.C.P., F.A.C.C., Assistant Professor of Clinical Medicine, Cardiovascular Consultant to Division of Gerontology, and Consultant in the Hypertension and the Cardiac Clinics, Washington University School of Medicine and Barnes Hospital, St. Louis, Mo.; Cardiologist and Director of Hypertension Clinic, St. Luke's Hospital, St. Louis, Mo.; Active Staff Physician, Deaconess Hospital, and Member of Consultant Staff, Missouri Baptist Hospital and St. Joseph Hospital, St. Louis, Mo.; Consultant, Council on Drugs, American Medical Association; Medical Consultant, Fifth Army of the United States, Office of the Surgeon, Chicago, Ill., pp. 439, illustrated, published by The C. V. Mosby Company, St. Louis, 1960.

Dr. Edwards' textbook is certainly very complete, well organized and well written. The reviewer would have preferred that the references be listed at the end of each chapter. There are very few illustrations. There are a moderate number of tables and diagrams. The text is quite up-to-date and discusses many things, including such special tests as aortography. It contains some illustrative case reports and these are of considerable value. The book is an excellent one for the practicing physician who deals with hypertensive patients. On the other hand, one might bring up the criticism that all of this material has been published in somewhat similar form by other authors and in the fairly recent past. This book is recommended to practitioners of medicine who are dealing with hypertensive patients.

AK

AERODYNAMIC CAPTURE OF PARTICLES, *Proceedings of a Conference held at B.C.U.R.A. Leatherhead, Surrey, 1960. The symposium was edited by E. G. Richardson, King's College, Newcastle upon Tyne. Published by Pergamon Press, New York, Oxford, London, Paris, 1960.*

This interesting, well-written book is not of particular interest to the practicing physician. It is of great interest to the research scientist interested in smoke and dust. There are discussions relating to distribution of various sized particles, the effect of water on particles, discussions of radio-active gases, etcetera. The book consists of papers by a group of English scientists, edited by E. G. Richardson. It is a valuable addition to this field.

AK

W. B. SAUNDERS COMPANY features the following recent books in their full page advertisement appearing elsewhere in this issue:

FONTANA AND EDWARDS—CONGENITAL CARDIAC DISORDERS

a vital statistical study to aid you in a better understanding of malformations of the heart.

WILLIAMS — Textbook of ENDOCRINOLOGY

a definitive source emphasizing the effects of endocrine changes on body metabolism.

1962 CURRENT THERAPY

today's best treatments — ranging from external cardiac massage for cardiac arrest through current use of antibiotics in treating bacterial infections.

Effect of Angiotensin on Pulmonary Circulation and Ventricular Function—P. N. Yu, M. N. Luria, J. K. Finlayson, C. A. Stanfield, H. Constantine, and F. J. Flatley

Circulation—Vol. 24:1326 (Dec.) 1961

The effects of angiotensin (Hypertensin II) given by intravenous infusion on pulmonary circulation and ventricular function were studied in 16 normotensive patients and 8 anesthetized dogs. During angiotensin infusion the following changes were observed: (a) an increase in pressures in both systemic and pulmonary circuits and 4 cardiac chambers, and variable change in pulmonary artery-pulmonary wedge (or left atrial) pressure gradient; (b) slightly decreased or unchanged cardiac output and stroke volume; (c) significantly increased total systemic and total pulmonary resistances; (d) significant increase in stroke work of both ventricles; (e) significant prolongation in the circulation time from femoral artery to femoral artery and slight prolongation in mean transit time from pulmonary artery or right heart to the femoral artery, and (f) no significant alteration in total or "central" blood volume. It is concluded that: (a) angiotensin is a very powerful vasopressor agent and has its action primarily on the systemic circulation; (b) in the compensated human and canine hearts it also increases myocardial contractility and ventricular function; and (c) in patients without mitral valvular lesions or intracardiac shunts the hemodynamic changes in the pulmonary circulation are mostly secondary.

Myocardial Metabolism in Progressive Muscular Dystrophy—J. F. Sundermeyer, S. Gudbjarnason, V. E. Wendt, P. B. den Bakker, and R. J. Bing

Circulation—Vol. 24:1348 (Dec.) 1961

Myocardial metabolism was studied in 11 patients with progressive muscular dystrophy. The cardiac outputs were elevated in all patients. Myocardial extractions of pyruvate and lactate were negative in 2 patients. Inorganic phosphate concentrations in blood were elevated. Malic dehydrogenase and aldolase were released by the heart in several patients. Differences in oxidation-reduction potential between arterial and coronary venous blood were positive, suggesting glycolysis in the heart muscle. This was accompanied by increased myocardial extraction of glucose. Apparently aerobic glycolysis occurred, since sufficient oxygen was present to account for all glucose extracted. Stimulation of glycolysis by inorganic phosphate was suggested by the relationship between the elevated inorganic phosphate concentration in blood and the myocardial glucose extraction. This suggests the possibility of uncoupling of oxidative phosphorylation in the myocardium.

Arteriosclerotic Vascular Disease and Testicular Fibrosis—F. G. Dalldorf

Circulation—Vol. 24:1367 (Dec.) 1961

An inverse relationship is demonstrated between arteriosclerotic vascular disease and advanced testicular fibrosis. The autopsy protocols and sections of the testes were examined in a group of 199 men over the age of 35 years who were free of known causes of either vascular disease or testicular fibrosis. In 41 (22%) of the cases, testicular sections showed changes ranging from marked fibrosis of the peritubular membranes to complete hyalinization of all seminiferous tubules. Testes of the remaining men showed minimal or no signs of testicular fibrosis. Of these 155

patients with normal or minimally fibrotic testes, 47 (30.7%) had complications of arteriosclerotic vascular disease (i.e., myocardial or cerebral infarcts, arterial insufficiency with gangrene, arteriosclerotic aneurysms) and in 36 cases (23.5%) those complications were considered to be the cause of death. Of the 44 cases with advanced testicular fibrosis, 4 (9.1%) had complications of arteriosclerotic vascular disease and only one patient (2.2%) died of the disease.

Dictary Control of Serum Cholesterol in Clinical Practice—N. Jolliffe, E. Maslansky, F. Rudensey, M. Simon, and A. Faulkner

Circulation—Vol. 24:1415 (Dec.) 1961

The purpose of this article is to help implement the recommendation of the American Heart Association concerning "reasonable substitution of polyunsaturated for saturated fats" as a "possible means of preventing atherosclerosis and decreasing the risk of heart attacks and strokes." The rationale behind the use of the Prudent Diet, Prudent Reducing Diet, Therapeutic Diet and Low-Fat Diet is presented. Instructions for the use of the Prudent Diet and the Prudent Reducing Diet as used in the Diet and Coronary Heart Disease Study Project are included, as well as the effects of these diets on the serum cholesterol levels of men aged between 50 and 59 years.

Hemophilia Syndromes: A Survey of 267 Patients

—J. F. Wilkinson, F. Nour Eldin, M. C. G. Israels, and K. Barrett

Lancet—Vol. 2:947 (Oct. 28) 1961

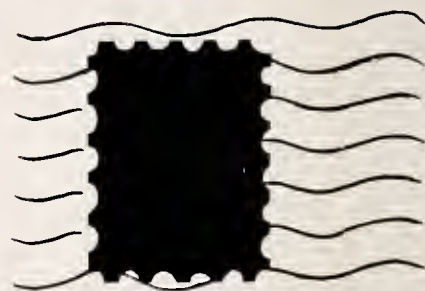
A clinical and laboratory survey was made of 267 patients—229 with hemophilia, 38 with Christmas disease. In 231 cases the diagnosis was made before the patient was 5 years old. Excessive traumatic bleeding, spontaneous bruising, hemarthrosis, dental bleeding, and epistaxis are the commonest symptoms; central nervous system bleeding affected only 13. Commonest cause of death was alimentary-tract hemorrhage, but total deaths numbered only 20. Blood group distribution was normal. One hundred fourteen patients had normal blood clotting time, 25 had normal prothrombin consumption, but none had a normal thromboplastin-generation test. Clinical grade, plasma antihemophilic globulin, and Bridge anticoagulant are related. Cases with over 1% antihemophilic globulin are likely to be clinically mild; cases with Bridge anticoagulant index over 2 are likely to be clinically severe. Full data are given in 10 tables.

Defects in Steroidal Metabolism of Subjects With Adrenogenital Syndrome — A. M. Bongiovanni and W. R. Eberlein

Metabolism—Vol. 10:917 (Nov., part 2) 1961

The adrenogenital syndrome due to congenital adrenal hyperplasia represents the clinical consequence of deficient adrenocortical secretion of cortisol, attributable to one of several well-defined "blocks" in the biosynthetic pathway. The common denominator in all well recognized variations of the disorder is virilization. In the uncomplicated, usual form of the disease there is a defect of steroidal 21-hydroxylation, which is often incomplete. In the "salt-losing" type, the deficiency of 21-hydroxylase is more severe, without other notable biochemical distinctions from the previous type. The hypertensive variety is characterized by a lack of 11-hydroxylase and hence an accumulation of 11-desoxycortisol and desoxycorticosterone. Finally, a particularly severe "salt-losing" form has been recently defined that results from inadequate 3 β -ol steroid dehydrogenase. This form of the disorder displays the earliest interruption in the sequence of cortisol synthesis that has been biochemically distinguished to date.

L E T T E R S



TO THE EDITOR

Dr. Alfred Kahn, Jr.
1300 West Sixth Street
Little Rock, Arkansas

Dear Doctor:

I appreciate very much your letter of recent date, giving me an expression of your views on the Kerr-Mills Bill and the King-Anderson Bill.

Please be assured that I am still opposed to legislation that would provide a health insurance program for the elderly under the Social Security system, as recommended by the King-Anderson Bill.

However, in all probability the membership of the Committee on Ways and Means will determine to place this subject on its agenda for consideration during this Session. At the moment I am not in a position to say what action the Congress may take in the final analysis, but, as stated, I am personally still opposed to the Social Security approach for this type of program.

With kindest regards and best wishes, I am

Sincerely yours,
Wilbur D. Mills

ANSWER—What Is Your Diagnosis?

57-YEAR-OLD WHITE MALE

Patient had been a lead and silver miner for approximately four years in the mid-twenties. He appeared complaining of progressive shortness of breath. Respirations were 32 per minute.

DIAGNOSIS: Silicosis.

X-RAY FEATURES: There is marked patchy fibrosis and spotty calcifications in the upper lung fields with typical eggshell-type hilar and parenchymal calcifications. The hilar structures are retracted upward and there is associated pleural reaction.



Sponsored by Arkansas Tuberculosis Association

CHRONIC BRONCHITIS IN GREAT BRITAIN

General practitioners participated in a project to find out the prevalence of chronic bronchitis. Among the findings were that the condition is more prevalent in urban than in rural areas, in smokers than nonsmokers, in those less favored economically than in the better off.

Chronic bronchitis presents general practitioners with one of their most frequent and intractable problems. Although palliative treatment is possible and often rewarding, prevention should be the aim; and in a disease of such insidious onset, general practitioners may have to carry the main burden. To advise and treat effectively patients with early bronchitis they need more detailed knowledge of the nature and etiology of the disease than any single experience can provide. Thus, the Research Committee of the College of General Practitioners of Great Britain in 1957 formed a small group to plan and execute a series of investigations into chronic bronchitis. This paper presents preliminary epidemiologic findings.

The excessive mortality from bronchitis in industrial areas and in poorer families is well known, and some studies have suggested a close relationship between air pollution and chronic bronchitis. Both these conclusions, however, derive from certificates of causes of disability or death usually given by general practitioners, so that the apparent social or geographical patterns might reflect differences between doctors in diagnostic habits and standards of certification.

PLAN OF SURVEY

The present survey was conducted by general

practitioners, using a standard clinical questionnaire, to find out the frequency of specified respiratory symptoms in a randomly selected sample of their patients. One of the objectives was to compare the prevalence of "chronic bronchitis" in various population groups with the distribution of mortality and morbidity on routine vital statistics and with the pattern based on a standard diagnosis derived from defined items in the questionnaire. Another objective was to relate clinical assessments and a physiological test of respiratory disability to such variables as age, sex, smoking habits, and place of residence.

Previous mortality and morbidity studies suggest that the age group 45-64 is of crucial importance in the evolution of chronic respiratory disease. Samples were therefore drawn by the Ministry of Health of all men and women on the practicing lists of participating doctors in each of the five years from 40 to 44, 45 to 49, 50 to 54, 55 to 59, and 60 to 64.

Ninety-two practitioners expressed a willingness to take part. The survey was conducted among 1,569 persons (787 men and 782 women). The wives of 442 men selected were also interviewed.

In the absence of any agreed definition of bronchitis in symptomatic terms, each practitioner was asked to note whether he thought that the patient suffered from chronic bronchitis, asthma, or any other chest disease. The records were then divided into "bronchitis" and "others." Three criteria were used for "standard diagnosis" of bronchitis—morning phlegm in winter, attacks of cough and phlegm lasting three weeks over the past two years, and breathlessness when walking.

A National Survey Carried Out by the Respiratory Diseases Study Group of The College of General Practitioners, *British Medical Journal*, October 14, 1961.

The prevalence of chronic bronchitis was 17 per cent in the men surveyed and 8 per cent in the women. In younger subjects, chronic bronchitis was diagnosed almost as often in the women as in the men. Beginning with the 45-49 group, the data show that in men there is a steady increase with age of approximately 1 per cent per year. The age gradient for women is much less steep. The prevalence of chronic bronchitis diagnosed in males is nearly twice as great in urban as in rural areas.

The difference in bronchitis mortality between the urban and rural areas is of about 2 to 1 in men and less in women. On the other hand, when the "standard diagnosis" rates are compared, the rural-urban gradient in males becomes much steeper, and there is a suggestion of an increased prevalence among females in the larger cities compared with the other areas. Thus differences in diagnostic habits between doctors may tend to conceal urban-rural contrasts in morbidity and mortality statistics based upon their certificates.

SMOKING AND SOCIAL FACTORS

In relation to smoking, the prevalence of bronchitis ranged in men from 6 per cent for non-smokers to 18 per cent among smokers and, correspondingly, from 5 per cent to 12 per cent in women.

It is difficult to make valid comparisons between the two sexes in the prevalence of bronchitis in relation to smoking, for there are too few nonsmoking men and too few heavy-smoking women. However, it was obvious that the prevalence of chronic bronchitis is very similar among men and women with comparable smoking habits except for a higher prevalence among male smokers who on the average smoked more than the female smokers.

In both sexes, there was an upward trend in bronchitis prevalence with descending socioeconomic conditions. At ages 45 to 64 the rate for men rose from 199 per 100,000 in what was designated as Group I, consisting of patients in the most favorable socio-economic situation, to 1,048 per 100,000 in Group V, at the other extreme. For women, it rose from 35 per 100,000 in Group I to 87 per 100,000 in Group V.

DISCUSSION

Impaired ventilatory capacity was effectively demonstrated by general practitioners using a simple test of respiratory function. The levels they obtained were consistently lower than those obtained by trained workers, but the trends in relation to age, sex, and smoking habits in men were consistent with those of the others.

The patterns of the distribution of chronic bronchitis prevalence based on practitioners' diagnosis are in broad agreement with those given by a "standard diagnosis" based on the presence of defined symptoms. In whichever of those two ways it is defined, chronic bronchitis as found in this survey shows the same relationship to age, sex, social class, and place of residence as the mortality or morbidity rates for this disease recorded in the national vital statistics.

If this sample can be taken as fairly representative of the country as a whole, the striking social pattern seen in mortality data is reflected in morbidity, and these social-class differences in prevalence cannot be attributed to differences in smoking habits. Here again standardization of diagnosis has emphasized the importance of the social-class gradient in the disease. The sex difference, on the other hand, may be largely due to the divergence in smoking habit.

THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

April, 1962

U.C. MEDICAL CENTER LIBRARY

APR 25 1962

San Francisco, 22

Vol. 58 No. 11

FORT SMITH, ARKANSAS

86th ANNUAL SESSION
ARKANSAS MEDICAL SOCIETY

HOT SPRINGS

APRIL 29—MAY 2, 1962



A CASE FOR HALDRONE®

(paramethasone acetate, Lilly)

In acute cases of **ALLERGY**,
Haldrone produces rapid re-
mission of symptoms with little
adverse effect on electrolyte
metabolism.

This is a reminder advertisement. For adequate information for use, please consult manufacturer's literature. Eli Lilly and Company, Indianapolis 6, Indiana.



Suggested daily dosage in hay fever:

Initial suppressive dose . . . 4-8 mg.
Maintenance dose 2-4 mg.

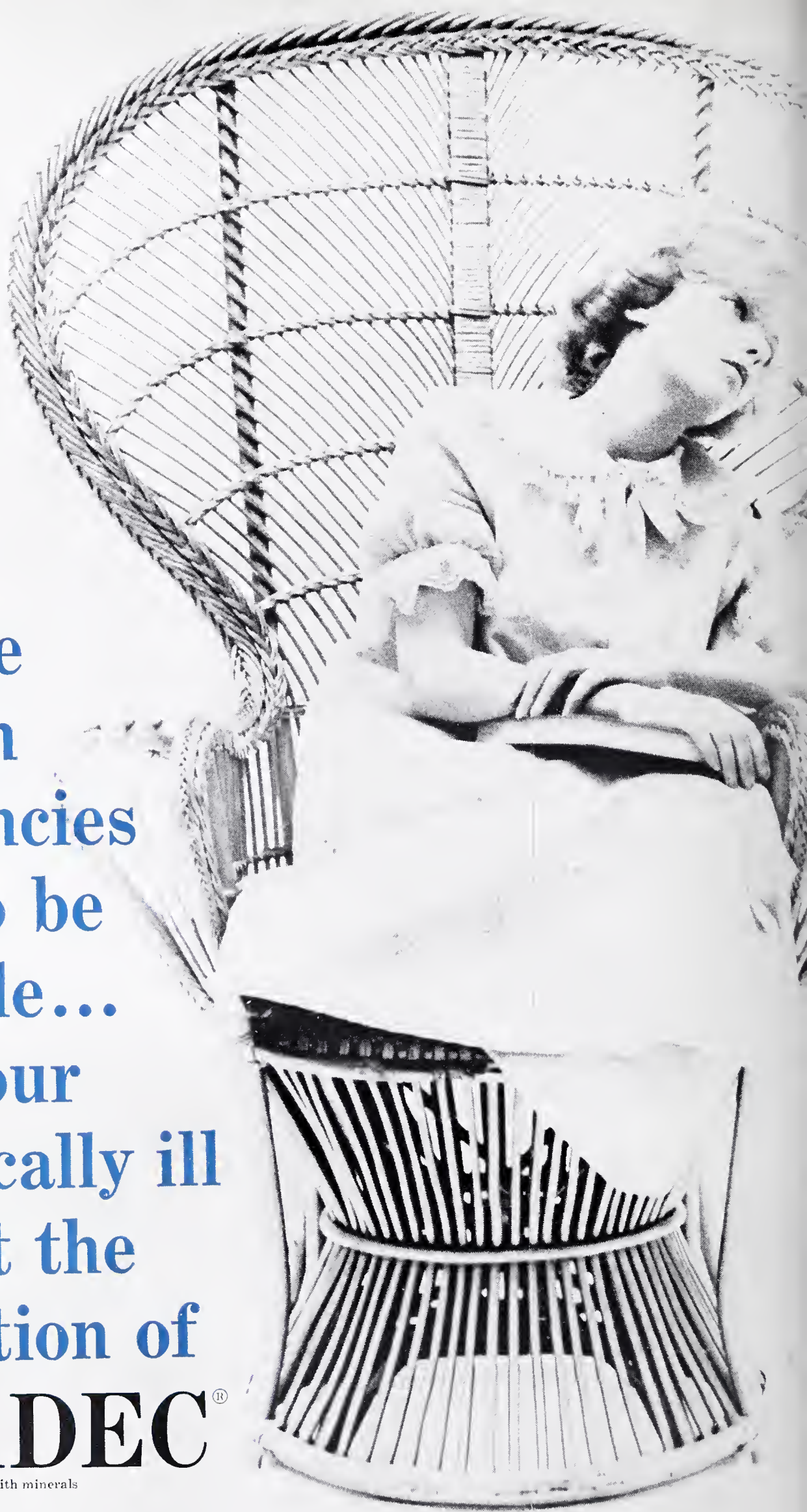
Supplied in bottles of 30, 100, and 500 tablets:

1 mg., Yellow (scored)
2 mg., Orange (scored)

240030

because
vitamin
deficiencies
tend to be
multiple...
give your
chronically ill
patient the
protection of
MYADEC®

high-potency vitamin formula with minerals



It is generally accepted that diseases of long standing and other conditions of physiologic stress may produce a need for additional vitamins. MYADEC is designed to supply that need. Just one capsule a day provides therapeutic potencies of 9 vitamins, plus selected minerals normally present in body tissues. MYADEC is also useful for the *prevention* of vitamin deficiencies in patients whose usual diets are lacking in these important food factors.

Each MYADEC capsule contains: *Vitamins*: Vitamin B₁₂, crystalline—5 mcg.; Vitamin B₂ (riboflavin)—10 mg.; Vitamin B₆ (pyridoxine hydrochloride)—2 mg.; Vitamin B₁ mononitrate—10 mg.; Nicotinamide (niacinamide)—100 mg.; Vitamin C (ascorbic acid)—150 mg.; Vitamin A—(7.5 mg.) 25,000 units; Vitamin D—(25 mcg.) 1,000 units; Vitamin E (*d*-alpha-tocopheryl acetate concentrate)—5 I.U. *Minerals* (as inorganic salts): Iodine—0.15 mg.; Manganese—1 mg.; Cobalt—0.1 mg.; Potassium—5 mg.; Molybdenum—0.2 mg.; Iron—15 mg.; Copper—1 mg.; Zinc—1.5 mg.; Magnesium—6 mg.; Calcium—105 mg.; Phosphorus—80 mg. Bottles of 30, 100, and 250.

PARKE-DAVIS

83562

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

THE JOURNAL OF THE *Arkansas* MEDICAL SOCIETY

Owned by

THE ARKANSAS MEDICAL SOCIETY
And Published Under Direction of the Council

ALFRED KAHN, JR., M.D., Editor
1300 West Sixth Street Little Rock, Arkansas
MR. PAUL C. SCHAEFER, Business Manager
218 Kelley Bldg. Fort Smith, Arkansas
LITTLE ROCK BUSINESS OFFICE
114 E. Second St. Little Rock, Arkansas

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY

WM. A. SNODGRASS, JR.—President Little Rock
H. KING WADE, JR., President-Elect Hot Springs
M. E. BLANTON, First Vice-President Jonesboro
CHARLES W. REID, Second Vice-President Pine Bluff
L. E. DREWREY, Third Vice-President Camden
H. ELVIN SHUFFIELD, Secretary Little Rock
W. R. BROOKSHER, Secretary Emeritus Fort Smith
BEN N. SALTZMAN, Treasurer Mountain Home
C. LEWIS HYATT, Speaker, House of Delegates, Monticello
J. P. PRICE, JR., Vice Speaker,
House of Delegates Monticello
MR. PAUL C. SCHAEFER, Executive Secretary,
P. O. Box 1345 Fort Smith

COUNCILORS

| | | |
|------------------|-------------------|-------------|
| First District | JOE VERSER | Harrisburg |
| | ELDON FAIRLEY | Osceola |
| Second District | HUGH R. EDWARDS | Searcy |
| | PAUL GRAY | Batesville |
| Third District | K. E. BEATON | Wynne |
| | PAUL MILLAR | Stuttgart |
| Fourth District | H. W. THOMAS | Dermott |
| | T. E. TOWNSEND | Pine Bluff |
| Fifth District | J. L. DEDMAN | Camden |
| | GEORGE C. BURTON | El Dorado |
| Sixth District | JOHN P. WOOD | Mena |
| | KARLTON H. KEMP | Texarkana |
| Seventh District | MARTIN EISELE | Hot Springs |
| | J. W. KENNEDY | Arkadelphia |
| Eighth District | ROBERT D. JONES | Little Rock |
| | BILL DAVE STEWART | Little Rock |
| Ninth District | ROSS FOWLER | Harrison |
| | STANLEY APPLGATE | Springdale |
| Tenth District | L. A. WHITTAKER | Fort Smith |
| | C. C. LONG | Ozark |

The Advertising policy of this JOURNAL is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

EXCLUSIVE PUBLICATION—Articles are accepted for publication on the condition that they are contributed solely to this JOURNAL.

COPYRIGHT 1962—By the JOURNAL of the Arkansas Medical Society.

NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to the membership.

SCIENTIFIC ARTICLES

Electrolytes—the Common
Denominator in Hypertension? 477
F. J. Haddy and H. W. Overbeck
Geriatrics and the Community
General Hospital 482
Marvin Altman and Wilna Snedecor
Facts That All Physicians Should
Know Concerning Accreditation
of Hospitals 486
A. Allen Weintraub

WHAT'S NEW

General Practice 489
Guy R. Farris, M.D.

TEACHING SEMINAR

Subacute Erosive Esophagitis 490
James H. Abraham, M.D.

FEATURES

Electrocardiogram of the Month 493
What Is Your Diagnosis? 494
Public Health at a Glance 495
Editorial 497
Medicine in the News 500
Things to Come 502
Obituary 503
Personal and News Items 504
Proceedings of Societies 505
New Members 506
Women's Auxiliary 506
Book Reviews 507
Tuberculosis Abstracts 508

Notice on Form 3579-P to be sent to Arkansas Medical Society, 218 Kelley Building, Fort Smith, Arkansas. Published monthly under direction of the Council, Arkansas Medical Society, Vol. 58, No. 11. Subscriptions \$3.00 a year. Single copies 50 cents. Entered as a second class matter, May 1, 1955, at the post office at Little Rock, Arkansas, under the Act of Congress of March, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 1, 1918. Second-class postage paid at Little Rock, Arkansas.

ELECTROLYTES — THE COMMON DENOMINATOR IN HYPERTENSION?

F. J. Haddy and H. W. Overbeck

*Departments of Physiology and Medicine,
University of Oklahoma Medical Center,
Oklahoma City, Oklahoma and
Departments of Medicine, VA Research
Hospital and Northwestern University
School of Medicine, Chicago, Illinois*

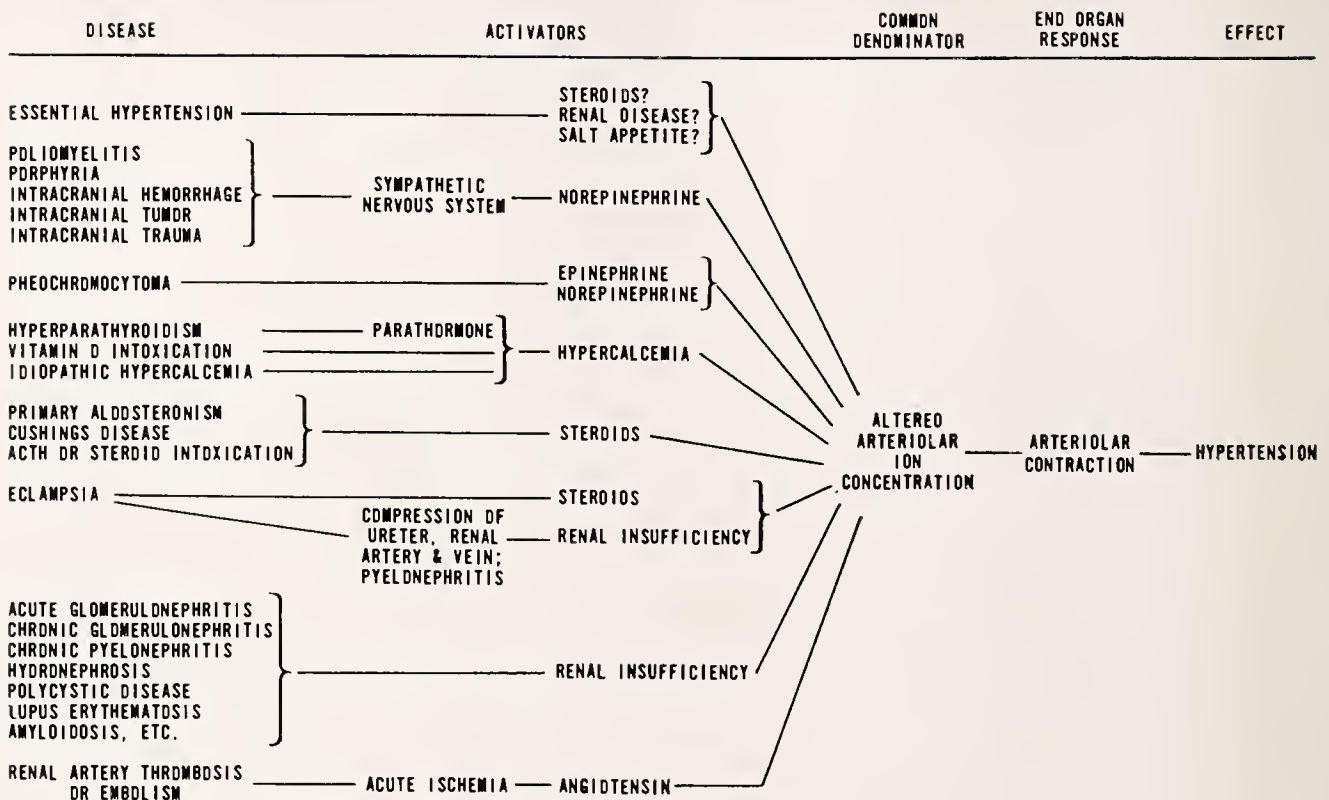
A LARGE BODY OF INDIRECT evidence¹⁻¹⁴ has gradually accumulated which suggests that the common denominator in arterial hypertension is an abnormal concentration of electrolytes in the wall of the arteriole. The electrolytes in some way cause the actomyosin of the arteriolar smooth muscle to shorten resulting in narrowing of the arteriolar lumen and high blood pressure. This hypothesis adequately explains the puzzling fact that hypertension accompanies a large number of superficially different diseases. Electrolyte concentration is controlled by many different organ systems. Therefore, many different diseases may cause it to be abnormal and, hence, may cause hypertension.

According to this hypothesis (Fig. 1), an adrenal cortical tumor produces hypertension by releasing steroids which, through a direct action on the arteriole and an indirect action on the kidney, change ion concentrations in the arteriolar wall in such a way as to cause the actomyosin to shorten; a parathyroid adenoma causes high blood pressure by releasing excess parathormone which, through effects upon bone and kidney, changes calcium and perhaps other ion concentrations in the arteriolar wall so as to cause arteriolar constriction; certain bilateral renal diseases produce

high blood pressure when renal insufficiency becomes severe enough to alter electrolyte concentration in the arteriole in a manner which stimulates the smooth muscle to contract; unilateral renal artery atherosclerosis, thrombosis, and embolism produce hypertension by causing ischemia, release of renin, production of angiotensin and, as a result of the latter, acute changes in arteriolar ion concentrations which cause arteriolar contraction; a pheochromocytoma releases epinephrine and norepinephrine which acutely alter arteriolar ion content and results in contraction; the high blood pressure of eclampsia results from excess steroids and altered renal function which produce vasoconstricting changes in arteriolar electrolyte concentration; essential hypertension results from some unknown disease of electrolyte or water regulation which causes a similar electrolyte abnormality in the arteriolar wall; and so on. According to this hypothesis, then, the arterial hypertension is diseases of water and electrolyte regulation.

A technique which would permit measurement of ion concentrations in the arteriolar wall would greatly facilitate an evaluation of this hypothesis. In the absence of such direct information, an evaluation must be based upon indirect evidence.

ELECTROLYTES—THE COMMON DENOMINATOR IN HYPERTENSION?



It is the purpose of this paper to briefly review this indirect evidence.

The first type of indirect evidence is presented in Table I. Some abnormality in water and/or electrolyte balance has been demonstrated in almost every variety of human arterial hypertension. This is true even in essential hypertension where there may be a high serum sodium concentration, low serum magnesium and potassium concentrations, and high intake and excretion of

sodium chloride. Further, a load of water and sodium chloride is excreted at an accelerated rate.

In most of the diseases listed in Table I, the cause of the electrolyte abnormality is known. For example, in primary aldosteronism, the hypernatremia, hypokalemia, hypomagnesemia, metabolic alkalosis, water and sodium retention, potassium, calcium and magnesium wasting, polydipsia and polyuria result from excess aldo-

TABLE I

Electrolytes in Various Types of Human Hypertension

| Electrolytes in various types of human hypertension | | | | | | | | | | | | | | | | | | |
|---|------------------|----|----------------|--------|---|----|----|-----------------|------------------|---------------------|---|----|----|---|------------------|------------------|-------------------|-----------------|
| | Intake | | | Output | | | | | | Serum Concentration | | | | | | | ECFV ¹ | |
| | H ₂ O | Na | Ca | Na | K | Ca | Mg | PO ₄ | H ₂ O | Na | K | Ca | Mg | H | HCO ₃ | HPO ₄ | | SO ₄ |
| Essential Hypertension | | ↕ | | ↕ | | | | | | ↕ | ↕ | | ↓ | | | | | |
| Primary Aldosteronism | ↑ | | | ↓ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↓ | | ↓ | ↓ | ↑ | | | ↑ |
| Cushings Disease | | | | ↓ | ↑ | ↑ | | ↑ | ↓ | ↑ | ↓ | | ↓ | ↓ | ↑ | | | ↑ |
| ACTH Intoxication | | | | ↓ | ↑ | ↑ | | ↑ | ↓ | ↑ | ↓ | | ↓ | ↓ | ↑ | | | ↑ |
| Cortisone Intoxication | | | | ↓ | ↑ | ↑ | ↑ | ↑ | ↓ | ↑ | ↓ | | ↓ | ↓ | ↑ | | | ↑ |
| Acute Renal Disease | | | | ↓ | ↓ | | | | ↓ | ↑ | ↑ | | ↑ | ↑ | ↓ | ↑ | ↑ | ↑ |
| Chronic Renal Disease | | | | | | | | | ↓ | ↓ | ↑ | | ↑ | ↑ | ↓ | ↑ | ↑ | ↕ |
| Hyperparathyroidism | ↑ | | | | ↑ | ↑ | ↑ | ↑ | ↑ | ↓ | ↑ | | ↑ | ↓ | | ↑ | ↑ | ↑ |
| Idiopathic Hypercalcemia | ↑ | | | | ↕ | | | ↑ | ↑ | | | | ↑ | ↓ | | ↑ | ↕ | ↑ |
| Vitamin D Intoxication | | | ↑ ² | | | | | ↑ | | | ↑ | | | | | ↑ | | |
| Eclampsia | | | | ↓ | | | | | ↓ | | | | | | | | | ↑ |

¹ extracellular fluid volume; ² due to increased absorption; ³ increased citrate concentration also; ↑ = increase; ↓ = decrease; ↑↔ = increase or no change

sterone; in chronic glomerulonephritis the hyponatremia, increased concentrations of potassium, phosphate and sulfate, metabolic acidosis, and many other water and electrolyte abnormalities result from renal insufficiency; with hyperparathyroidism, the hypercalcemia, hypophosphatemia, hypomagnesemia, polydipsia, polyuria and increased excretion of calcium and phosphorus result from excess parathormone. In a few of the diseases, the cause is in doubt. For example, the pregnant female has excess steroids and frequently pyelonephritis and/or mechanical compression of the renal artery, renal vein and ureter by the enlarging uterus. The urine flow rate in a gravida at term may be cut in half simply by changing from the lateral to supine position. However, it may not be unequivocally stated that these are the causes of the water and salt retention. In essential hypertension, we have only hints as to the cause of the electrolyte abnormality. There have been reports of increased urinary excretion of aldosterone, increased frequency of discrepancy between the function of the right and left kidney and an increased appetite for salt.

The second type of indirect evidence supporting the hypothesis is that experimental or therapeutic alteration of water and electrolyte balance may produce, aggravate, or ameliorate hypertension. In the normal rat and chicken, a high sodium chloride intake, after some time, produces hypertension which is ameliorated by increasing the intake of potassium. This experiment has its counterpart in the human. Normotensive diabetic children become hypertensive rather rapidly on a high-sodium, low-potassium diet; their blood pressures return toward normal on a high-potassium, low sodium diet, or on a high-potassium, high-sodium diet. There is even a report of the production of hypertension in a normal 14-year-old boy by feeding a high-sodium, low-potassium diet. Also of interest is the fact that rats become hypertensive on a high calcium diet plus administration of dihydrotachysterol. This, too, has its human counterpart. Increasing calcium intake in children by augmenting intestinal absorption of calcium as a result of accidental excessive ingestion of Vitamin D causes a reversible hypertension. Almost all of the remaining experimental procedures which produce hypertension involve systems which regulate water and electrolyte distribution and excretion. A partial

list includes administration of desoxycorticosterone acetate (DCA) or cortisone, renal artery constriction, renal compression, adrenal regeneration, and bilateral nephrectomy.

Existing hypertension, whether produced experimentally (DCA, adrenal regeneration, bilateral nephrectomy, etc.) or occurring naturally (essential hypertension, chronic nephritis, etc.) is accelerated by a high-sodium diet. A very high potassium diet seems to reduce blood pressure in patients with essential hypertension. On the other hand, it tends to raise blood pressure in animals with hypertension due to renal artery constriction or to administration of DCA plus sodium chloride.

A low-sodium diet tends to ameliorate most types of human and experimental hypertension. Oddly enough, a low-potassium diet reportedly reduces blood pressure in patients with essential hypertension and in rats with figure-of-eight renal ligature hypertension. Most types of hypertension are also ameliorated by administration of pharmacologic agents such as chlorothiazide which increase the urinary excretion rate of water, sodium chloride, potassium and magnesium.

The third type of indirect evidence concerns the water and electrolyte content of vascular tissue in human and experimental hypertension. In 1952, Tobian and Binion (1) studied the composition of electrolytes and water in the wall of the renal artery of patients dying with and without hypertension and demonstrated a significantly increased amount of sodium and water per unit of dry solids in the hypertensive group. Since then, some abnormality in water and/or electrolyte content of large vessels has been demonstrated in most types of experimental hypertension (Table 2). Even hypertension caused by infusion of norepinephrine, angiotensin, or vasopressin is associated with changes in the vessel wall. The potassium content immediately falls and the sodium content rises. The reverse changes occur in the serum.

The fourth type of indirect evidence concerns the vasoactivity of ions. If the hypothesis is valid, slight change in the blood concentration of the naturally occurring ions should produce vasoconstriction or vasodilation in a test system. We have been studying the local effect of cations, anions and tonicity upon blood vessels in the dog limb, kidney and heart since 1956. The techniques utilized include measurement of small

TABLE 2

Aortic Content of Electrolytes in Experimental Hypertension

| | K | Na | Cl | Mg | P | H ₂ O |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|------------------|
| Desoxycorticosterone | ↑↓ | ↑ | | ↓ | | ↑↔ |
| Post desoxycorticosterone | ↑↔ | ↑↔ | | | | ↑↔ |
| Adrenal regeneration + NaCl | ↑ | ↑ | ↔ | | | |
| Renal Artery Constriction | ↑ | ↑ | ↑ | | | |
| Renal figure of 8 ligature | ↑ ² | ↑ ² | ↔ ² | ↑ ² | ↑ ² | ↑ ² |
| Bilateral nephrectomy | ↑↓ | ↑ | | ↓ | | ↔ |
| Norepinephrine infusion | ↓↔ | ↑↔ | | | | ↑ |

1 per unit dry solids; 2 per unit alkali soluble protein;
↔ = no change; ↑ = increase; ↓ = decrease; ↑↔ = increase or no change; ↑↓ = studies at variance

arterial and small venous pressures at known rates of blood flow in order to permit a more direct study of the reaction of the arteriole. We found that some of the ions are highly vasoactive and the active ones include potassium, calcium, magnesium, hydrogen, pyruvate, lactate and citrate (Table 3). Potassium produces a measurable dilation when the serum concentration is raised by less than one mEq/l. (15-17). Elevation of the serum calcium level by just several mg% causes constriction (17, 18). Raising the serum magnesium concentration by several mg% causes dilation (17, 18). Increasing the blood hydrogen ion concentration so as to decrease pH by 0.0 to 0.2 units also causes measurable dilation (19). Sodium seems to have little direct effect (17), just as it has little direct effect upon heart muscle. However, if serum sodium concentration is increased or decreased so as to increase or decrease serum tonicity, the effect is dilation or constriction (17). This vasoactivity undoubtedly results indirectly through osmotic movement of water because the effect is the same if tonicity is raised or lowered with the non electrolyte dextrose. It is possible that the vasoactivity produced by this water movement is active, due to dilution or concentration of intracellular vasoactive ions, or passive, due to dehydration or overdehydration of the vessel wall. Of the anions, acetate and citrate are particularly active, producing dilation when their concentrations are slightly increased (19).

Thus it appears that the indirect evidence supports the hypothesis that electrolytes are the common denominator in hypertension. To repeat, some abnormality in water and/or electrolyte balance has been demonstrated in almost all types of human hypertension. Experimental or

TABLE 3
Local Effect of Cations and Anions upon Peripheral Vascular Resistance

| | Increased Serum Concentration | Decreased Serum Concentration |
|-------------|-------------------------------|-------------------------------|
| Sodium | O ¹ | O ² |
| Potassium | D ³ | I |
| Calcium | I | D |
| Magnesium | D | O |
| Hydrogen | D | I |
| Bicarbonate | O | O |
| Chloride | O | ? |
| Sulfate | O | ? |
| Phosphate | O | ? |
| Nitrate | O | ? |
| Lactate | O | ? |
| Pyruvate | D | ? |
| Nitrite | D | ? |
| Acetate | D | ? |
| Citrate | D | ? |

O=No effect; I=Increase; D=Decrease; ?=Not studied
1=D if tonicity raised; 2=I if tonicity lowered; 3=I if concentration exceeds 10 mEq/L

therapeutic alteration of water and electrolyte balance may produce, aggravate or ameliorate human and experimental hypertension. Almost all experimental procedures which produce hypertension in some way alter electrolyte and/or water intake, distribution, and excretion. The electrolyte and/or water content of arteries is abnormal in human hypertension and in almost

all varieties of experimental hypertension. Finally, certain of the naturally occurring cations and anions are highly vasoactive in a test system. The next step in the evaluation of this hypothesis is the actual measurement of ion concentrations in the arteriolar wall of the human hypertensive. Until this difficult measurement is achieved, the hypothesis presented in Figure 1 will remain a hypothesis.

REFERENCES

1. Tobian, L., Interrelationship of electrolytes, juxtaglomerular cells and hypertension. *Physiol. Rev.* 40:280, 1960.
2. Friedman, S. M. and C. L. Friedman. The effect of ions on vascular smooth muscle. In *Handbook of Circulation*, edited by F. W. Hamilton, Am. Physiol. Soc., in press.
3. Friedman, S. M., Cationic exchange and control of blood pressure. *The Medical Clinics of North America* 45:285, 1961.
4. Raab, W., Transmembrane cationic gradient and blood pressure regulation. Interaction of corticoids, catecholamines and electrolytes in vascular cells. *Am. J. Cardiology* 4:752, 1959.
5. Haddy, F. J., Current thinking on hypertension. *Medical Times* 87:16, 1959.
6. Hypertension and Its Treatment. *Medical Clinics of North America*. Irvine H. Page, Guest Editor. Vol. 45, No. 2, March 1961, W. B. Saunders Company, Philadelphia and London.
7. Essential Hypertension. An International Symposium. Berne, June 7th to 10th, 1960, Sponsored by Ciba. Edited by K. D. Koch and P. T. Cottier, Springer-Verlag, Berlin-Göttingen-Heidelberg, 1960.
8. Proceedings of the Conference on Basic Mechanisms of Arterial Hypertension. *Circulation* 17:641, 1958.
9. Hypertension, Vol. VIII, Renal, Electrolyte and Autonomic Factors, Council for High Blood Pressure Research, American Heart Assoc., New York, 1960.
10. Seminar on the Role of Salt in Cardiovascular Hypertension. *Am. J. Cardiology* 8:526, 684, 863, 1961.
11. Fries, E. D., Hemodynamics of Hypertension. *Physiological Reviews*. 40:27, 1960.
12. The first Hahnemann Symposium on Hypertensive Disease. Ed. John Moyer, W. B. Saunders Company, 1959.
13. Ciba Foundation Symposium on Hypertension. Little, Brown and Co. Boston, 1954.
14. Hypertension—A Symposium. Ed. E. T. Bell, University of Minnesota Press, Minneapolis, 1950.
15. Scott, J., D. Emanuel and F. J. Haddy. Effect of potassium on renal vascular resistance and urine flow rate. *Am. J. Physiol.* 197:305, 1959.
16. Emanuel, D. A., J. B. Scott and F. J. Haddy. Effect of potassium on small and large blood vessels of the dog forelimb. *Am. J. Physiol.* 197:637, 1959.
17. Overbeck, H. W., J. I. Molnar and F. J. Haddy. Local effects of sodium, potassium, calcium, magnesium, acetate, hypertonicity and hypotonicity upon resistance to blood flow through the vascular bed of the dog forelimb. *Am. J. Cardiology*, 8:533, 1961.
18. Haddy, F. J., Local effects of sodium, calcium and magnesium upon small and large blood vessels of the dog forelimb. *Circulation Res.* 8:57, 1960.
19. Molnar, J. I. and F. J. Haddy. Local effects of anions and the hydrogen ion upon vascular resistance in the dog forelimb. *Physiologist* 4:75, 1961.

GERIATRICS AND THE COMMUNITY

GENERAL HOSPITAL

*Marvin Altman, F.A.C.H.A., Administrator,
Sparks Memorial Hospital and Sparks Manor*

and

Wilna Snedecor, Social Service Director

WE BELIEVE FROM STUDY, observation and experience that geriatrics has a definite place under the supervision of the general hospital in the community. For some time now, geriatrics has come to the front in the thinking of the community, its doctors and health field leaders. For many years such specialized services as pediatrics and psychiatry took the lead in health field emphasis. A good job is being done in these. Now, as the life span has been extended by research and work in health services for the older person, geriatrics is beginning to be recognized as a separate and definite subject needing attention. Disease and injuries of the elderly are usually taken care of in the general hospital, perhaps in a separate wing or to some extent separated from patients of other age groups. This is good, but as the attention begins to bring to light more needs of the elderly than just mending an injury or curing a disease, more and more the general hospital and the people of the community are beginning to realize that a period of hospitalization is not all that is needed by the geriatric patient.

As the life span has increased, so have the problems facing an elderly patient needing more than simple home care. Most proprietary nursing homes have given good service with facilities available and the sometimes limited skills of their working personnel . . . but this still is not enough. And so the general hospital is being faced with the problem of the long-term elderly patient. They see that spending weeks and months in a hospital needs to be supplemented with other

needs of the geriatric patient. Thus many studies and evaluations of the separation of the geriatric patients from the general patients are being done . . . whether to keep them in a special wing of the hospital building or whether to have an entirely separate building not connected with the hospital where trained personnel can assist in making a home for the elderly and still have the needed hospital facilities.

Hospital authorities faced with this problem of geriatrics have an important decision to make. Should a new wing be added to the present building? Should a portion of the present building be used exclusively for the geriatric patients? Should a separate building, away from the hospital, be constructed as a nursing home? Before this decision is made, all concerned should take a very objective look at their long-term plans for the hospital and the future health needs of the community. Many hospital buildings have been constructed with their central facilities adequate to accommodate future expansion along with community growth. In this case, the central facilities may be adequate to accommodate an added wing for geriatrics. If central facilities are already being taxed to capacity, it would be unwise to add another load, hoping to get by. If the present hospital building is not being used to comfortable capacity it might be possible to use one portion of bed space for geriatrics alone. However, in either case, one still faces the problem of trying to make a homelike atmosphere for those geriatric cases who need to use the facilities for daily living perhaps for years. We want to stress

that each community hospital has its own unique situation and it must be up to the local leaders to make a careful study and evaluation of their present facilities, giving full consideration to the future demands for their hospital.

Deciding that the separate building plan would be the more ideal type of unit for us, we began several years ago to make a study of building plans, types of living programs suited to the elderly, and types of nursing services geared specifically to their needs. Five years of study went into the planning of Sparks Manor, our geriatric unit of Sparks Memorial Hospital, located ten blocks from the hospital. Nursing homes were visited from coast to coast; advice sought from doctors specializing in geriatrics; conferences with social workers and other workers in health fields; studies were made with those in the field of psychiatry; advice was given by nurses already in the geriatric field; conferences with architects who had built nursing homes and hospitals and building designs were studied.

When all the preliminary studies were completed, we were again convinced that a separate building, away from the hospital, was the most desirable plan for us. It was also decided that the geriatric unit should be directly under the supervision of the hospital, using the same Board of Trustees and administration. It was decided that the unit should be complete enough to accommodate self-care, ambulatory, semi-ambulatory, bed-fast and advanced senile residents. The next step was to confer with the local county medical society and the local ministerial association. We felt that the members of these groups were always in close contact with elderly patients and members of their churches and would know many of their needs and desires. It was their belief, as well as ours, that the geriatric unit should not only include the best of medical and nursing care but should provide an attractive home atmosphere with a program of pleasant daily living. With the wholehearted approval of these groups, the idea and plans were submitted to various civic groups, clubs, churches and health groups of the entire community. With their approval and support, we moved into the next step . . . planning the physical plant and the fund-raising campaign. I would like to add that there are many good reference books and material on construction, care of the elderly, facilities for long-term care and many others which we found very helpful. Some which

we found especially helpful are: "Aging in Western Societies", edited by Ernest W. Burgess; "Handbook of Social Gerontology", edited by Clark Tibbitts; "Handbook of Aging and the Individual", edited by James E. Birren; "Planning New Institutional Facilities for Long-Term Care" by Edna E. Nicholson.

Sparks Manor was constructed at a cost of \$1,040,000.00 furnished and equipped, and dedicated in November 1958. The bed capacity is 50, with central facilities complete for future expansion to 104. The building is constructed on a 14-acre plot with 40,000 square feet of floor space; completely air-conditioned with individual room controls; all private bedrooms; two-bedroom combinations for couples; completely fire-resistant. Central facilities include: main lounge, chapel, library, beauty-barber shop, Physical Therapy section, hobby workshop, main dining room, kitchen, laundry, linen room, offices. Each of the four wings include: bedrooms, lounge, sunroom, nurses station, treatment room, diet kitchen, linen room and resident's storage room. Each bedroom has a private patio; one-floor level for all resident activities; hand rails in all bathrooms and all halls; bath lifts in bathrooms; basement for storage, maintenance shops and employees lockers. We have 24-hour registered nurse service, supplemented with licensed practical nurses, aides and orderlies; physical therapy, special dietary service; afternoon snacks and bedtime refreshments when desired. Personal laundry and beauty-barber shop services are included in the fee. Rates depend on the amount of nursing care required by the resident. They vary from \$225 for "self care" to \$350 for complete care per month.

The Manor is operated by Sparks Memorial Hospital under the same board of trustees and administration. The Manor and the hospital share the services of the administrator, director of nursing service, dietitian, personnel director and public relations director. Some elderly hospital patients are moved to the Manor when it becomes evident that their injuries or illnesses will require long-term care and the families agree. Many of our residents are completely ambulatory and some are on "self-care" basis. Quite a few have been with us since we opened. In making the Manor a home for the elderly it gets the patient away from the regular hospital atmosphere while still providing a high standard of nursing care. This approach, we believe, gives to the patient the type

of care and living desired for them by their family. Rates are reviewed monthly and are adjusted according to the condition and requirements of the resident. In other words, we believe we are providing for the community and this area a place where the highest quality of nursing and hospital care is achieved while at the same time providing a home with attractive facilities for gracious living. These things we find are being more and more appreciated by the families of our residents. Wholesome and attractive food is another "must" at the Manor for we realize that not only is mealtime an important occasion in the day for our residents but the "oldster" needs to be encouraged to eat a well balanced meal. Those who are physically able are encouraged to go to the main dining room for we find that visiting together over a meal has real therapeutic value.

Recreational and handicraft programs are carried on with the help of volunteers from the community. The ministers of the local association bring non-denominational devotional services on Sunday afternoons in the chapel. Those unable to go to the chapel may hear the service over our communications system. Watching TV, playing cards, working puzzles are favorite pastime activities. Parties are held for special occasions and at times "just for fun." There are no set visiting hours . . . friends and relatives may come and go at their convenience. Ambulatory residents may come and go as they please except where supervision is needed.

The Manor now operates at full capacity and at times we have a waiting list. As in any new venture and with a new approach, there have been problems. We have learned many things from our experiences during the past two years. We still maintain, without a doubt, that the best approach to geriatric care is through the community general hospital. The general hospital has experience in geriatrics, it has a staff trained in care of the elderly who have the approach and attitudes needed in this specialized type of care. These staff members also have the knowledge of equipment needed in this service. When once the people of the community come to accept the fact that geriatric care is a highly specialized field, they are most appreciative of the fact that the geriatric unit is under the supervision and directly operated by the hospital.

So, from our experiences, we urge those interested to seriously consider this approach and to

follow some very basic steps in establishing a separate geriatric unit or nursing home by their hospital. First, a complete survey to establish the real needs of the community for the care of the elderly. When the need becomes apparent, getting the complete cooperation and sanction of the local medical society and the local ministerial association are most important. These groups can give a great deal of helpful advice and moral support because of their experiences and relationship with the geriatric patients. The next step is to interest and educate the community as a whole on the needs and how you plan to meet them. By doing this, a great part of the community's final acceptance can come through seeing this plan as a part of a long-range program of health for the community. Next, careful studies should be made concerning construction of the building. Advice should be sought from those already having geriatric units and from architects who have made a study of hospital design.

Staffing the unit must not wait until the building is completed and ready for occupancy. It takes time for interviewing and screening of applicants for the jobs which will be available. We have found that not all nurses, aides, orderlies and even housekeeping and dietary help have the ability and really like to care for and work with the geriatric patient. It takes a special type person to have the understanding and patience needed in geriatric care. Then comes the time to plan for the grand opening and dedication of the building. This is where a good public relations program needs to be well functioning in advance in order for this to be a real occasion in the community. This is the time for all in the community to see the building and observe the standards of service and program being instituted. Only through their seeing and believing will this idea of specialized geriatric care be accepted. Once accepted, your unit is on its feet and your community feels its pride in its accomplishment.

I wish to add one more factor which is so vitally important to your geriatric unit . . . the family of the patient or resident. Much patience, understanding and sympathy needs to be expended on the family. Even though they know and you know that the community has one of the finest facilities in the land, the idea of placing a beloved member of the family in a nursing home brings emotional strain to the family . . . they become very critical of care and facilities . . . they cannot see the nurs-

ing home or the geriatric unit objectively. Once the break is made and they can see the care their loved one is receiving and the improvement he is making, then the thinking changes. By giving patient understanding to the family and the new resident at a time when it is needed most, your ties with the family are stronger and they become most helpful.

Our purpose at Sparks Manor is to provide an attractive home, complete with all facilities which make up a well-rounded life within the physical limitations of our residents, while adding the important factors of skilled supervision and the best in nursing care. We firmly believe we have the best approach to geriatric care . . . a facility under the operation of the community hospital.

FACTS THAT ALL PHYSICIANS SHOULD KNOW CONCERNING ACCREDITATION OF HOSPITALS

A. Allen Weintraub*

THE ACTUAL FUNCTIONING program of the Joint Commission on Accreditation of Hospitals is eight years old. In that short time it has reached a stage of importance, both ideally and economically that must be considered by all hospitals and members of the medical profession.

Basically, the major purposes of the Joint Commission are:

- (1) To apply certain basic principles and administration for efficient care of the patient.
- (2) To promote high quality care of medical and hospital care in all its aspects, in order to give patients the greatest benefits that medical science has to offer.
- (3) To maintain the essential diagnostic and therapeutic services in the hospital through coordinated effort of the organized medical staff and the governing board of the hospital.

There are other purposes, but these major ones best illustrate the over-all operation and objectives of the Joint Commission.

When speaking of the Joint Commission, one cannot overlook the striking and important events leading up to the formation of the Joint Commission on Accreditation of Hospitals.

The first effective demand for the systematic review and scientific evaluation of medical care originated soon after 1910. Surgery had gained great popular favor in the years just past, when the dramatic relief of suffering and disability and the prolongation of life that were offered by Surgery at its best had overcome much of the former dread of the hospital and the surgeon. Although the need for well trained surgeons far exceeded the available supply at that time, there was a surplus of poorly trained surgeons. The medical literature of the day, particularly Flex-

ner's famous survey of medical education, gives us the picture of a greatly over-crowded profession, made up in large part of poorly educated doctors. In the period between 1900 and 1909, some 165 medical schools had been turning out 5200 doctors annually, a majority of whom had not even a high school education before taking 24 or 30 months of medical education that often consisted largely of lectures and cramming for examinations with little or no laboratory and clinical work worthy of the name. (1)

I mention the above only because the influence of Flexner's 1910 report lay heavily on the Clinical Congress of Surgeons of North America, when in 1912 they gave the first organized expression to plans for comparable reforms in the quality of Hospital Care and Surgical Practice. The Philadelphia County Medical Society phrased it thus in 1914—

"That the County Medical Society endorse the request which the American Medical Association, the Clinical Congress of Surgeons of North America, and the American Hospital Association have forwarded to the Carnegie Foundation, asking that the Foundation prepare a report on the classification and *standardization of hospitals*—a report that will perform as a great service for the hospitals of this country, as the report on Medical Education has already performed for the Medical Schools." (2)

The Clinical Congress of Surgeons initiated action that resulted in its successor, the American College of Surgeons, obtaining grants for that purpose from the Carnegie Foundation. Leaders in the new American College of Surgeons made every effort to advocate a nation-wide survey of hospitals along the lines of Flexner's study. Their plan was that hospitals would be judged individually according to objective measurements of performance, based on a systematic analysis of

* Assistant Administrator, St. Vincent Infirmary, Little Rock, Arkansas

cases. When the great survey of hospitals of the United States and Canada was made possible, by the Carnegie grant, it was conducted by the American College of Surgeons. It is known that only 89 of 692 hospitals of 100 beds or more could meet any reasonable standard (3) and it has been said that the facts elicited by the first survey were so shocking that the survey committee ordered the individual survey reports destroyed. The situations encountered in the hospitals that were not up to standard are easily inferred from the standards that were set up later. There was a severe lack of organization, discipline, and supervision of the Medical Staff; no provision was made for a systematic review of the kind, and quality of medical care rendered; medical records were non-existent or fragmentary; there were no rules and regulations governing basic medical practice; and facilities for X-Ray and Laboratory diagnosis were completely inadequate.

The American College of Surgeons made the fateful decision that the public interest would be better served by not publishing the findings as they related to individual Institutions, until hospitals and doctors involved had had a chance to set their own house in order.

From this beginning, the American College of Surgeons, from 1918 to 1952, has worked diligently to obtain betterment of hospital care. Today, the Joint Commission on Accreditation of Hospitals, which has succeeded the American College of Surgeons in the field of Hospital Accreditation, has stimulated new interest.

To a hospital, accreditation means an Institution which because of its standards, attracts the best possible skilled personnel to its doors. It shows that the hospital knows and endorses only highest quality care and the best of modern facilities.

To the physician, it gives the assurance of a good physical plant with adequate diagnostic and therapeutic facilities and equipment, manned by qualified technical personnel. He belongs to a hospital where medical records mean something to him now, and to future generations who follow; where scientific conferences and reviews are held, and medical science is keeping abreast of the times and making every effort to forge ahead.

In my years in Administration, I have found that the greatest stumbling block is in the interpretation of the Joint Commission objectives. In

order that the readers might have a clearer understanding of the Joint Commission and its operation, I will highlight some of the most important items that are worthy of mention.

1. The Joint Commission Accreditation program is entirely voluntary.
2. To be eligible for a survey for accreditation, the Commission requires that the hospital have at least 25 beds, excluding bassinets and have been in operation at least 12 months and be accepted for listing by the American Hospital Association.
3. Accreditation should be the goal for small, as well as large hospitals. Quality care comes from people, not from facilities.
4. Accreditation costs nothing in dollars and cents, but does take time on the part of hospital boards, medical staffs, and administration.
5. With reference to staff appointments, the Commission states that the governing body of the hospital should be the ultimate authority. The medical staff, however, has the responsibility of making recommendations for staff appointments to the governing body. Also, that the selection of physicians to be recommended for medical staff appointment should be based on the following principles:
 - a. A license to practice medicine is not a guarantee of competence in any field. All that it confers is the legal right, not a moral right.
 - b. Privileges should be extended to qualified physicians to practice in the hospital in the fields of general medicine, surgery, pediatrics, obstetrics, gynecology, and other specialties, according to experience, judgment, ability, and competence, as evaluated by the Credentials Committee and recommended to the staff and the board.
 - c. Individual merit and competence should be the sole criteria for selection, and under no circumstances should the accordance of staff membership or professional privileges in a hospital be dependent alone upon certification or membership in specialty societies.
6. The Joint Commission is made up of members of the American College of Physicians, American College of Surgeons, American Medical Association, and American Hospital Association.

7. Safety for the lives of patients is a fundamental requirement for accreditation. No matter how excellent a hospital is in all other respects, if the building is a fire trap, it will not be accredited.
8. The Commission places great emphasis on the extent and care with which the Medical Staff reviews and evaluates clinical practice. Since good medical records, reliable diagnostic services, and competent well organized staffs are essential for good clinical review, these factors are closely surveyed. To be accredited, there must be evidence that the hospital medical staff is living up to its important responsibilities.
9. A physician, when accepting hospital appointment, assumes responsibility for supporting medical staff and hospital policies. He becomes a creative force in formulating future policies and standards for patient care. He works through the staff organization to maintain high standards. He supervises those less experienced, and accepts supervision from those more experienced. He accepts controls as a protection to himself as well as others. He contributes to the teamwork required in the modern practice of medicine. He makes it possible for the medical staff to be truly self-appraising and self-regulatory.
10. With reference to Consultation, the Commission states that a consultant is a second physician called by the attending doctor to examine and discuss his patient. In the sense in which they use the term, it does not necessarily imply seniority. Except in an emergency, consultation with another qualified physician is required in—
 - a. First Caesarean Section.
 - b. Curettages or other procedures by which

a known or suspected pregnancy may be interrupted.

- c. Operation performed for the sole purpose of sterilization on both male and female patients.
- d. Cases on all services in which, according to the judgment of the physician, the patient is not a good medical or surgical risk, or the diagnosis is obscure, or there is doubt as to the best therapeutic measures to be utilized.

A consultation is not complete or satisfactory, unless it includes an examination of the patient, and the patient's record and written opinion is signed by the consultant and attached to the record.

There are many other important items that should be presented, but I am certain that those already listed will convince all members of the medical profession that they not have a defeatist attitude in saying that accreditation is out of our reach—This is not so—All hospitals, small or large, with mutual cooperation with their respective boards, medical staff, and administration, can become fully accredited, but it does take teamwork.

The Joint Commission on Accreditation of Hospitals has taken on a tremendous responsibility in adopting this program, but this is the only way that the community can have assurance that its hospitals are rendering the efficient service we expect of it.

1. Flexner, A.; Medical Education in United States and Canada; Report to Carnegie Foundation for Advancement of Teaching with introduction by Henry D. Pritchett; pp. New York, D. B. Updike, the Merrymount Press, 1910.
2. Wetherill, H. G.; A Plea for Higher Hospital Efficiency and Standardization. *Surg., Gyn., and Obs.*, 20, 705-707, 1915.
3. Manual of Hospital Standardization; pp. Chicago; American College of Surgeons, 1946—page 8.

WHAT'S NEW?



GENERAL PRACTICE

By Guy R. Farris, M.D.

THE REALIZATION THAT medical schools are losing more and more qualified applicants to the newer headline space services has initiated the American Academy of General Practice to formulate a program in which career recruiting of future physicians by established doctors is the primary goal.

Project MORE is the name given to this undertaking and has already been put into practice in October 1961 in two localities, Binghamton, New York and Omaha, Nebraska.

The framework of Project MORE includes the taking of the story of medicine and medical education into the high schools of local communities by physicians practicing within the communities. This is accomplished by special assemblies for junior and senior students, the formation of "Ars Medica" clubs with the assistance of local school science teachers and local physicians establishing discussion groups with those students showing special interest in the Medical Sciences.

The academy realizes that doctors are the best recruiters of doctors. But, with our growing population and the demands for more and more physicians, the usual father-son arrangement of the past is no longer adequate.

The physicians in the two areas in which Project MORE has been put into operation has been assisted by press, radio, and news media and by proclamation by the mayors of the two communities designating November as "MD Career Month."

The parents of those students that show special interest are also contacted and informed of the facts of medical education and of the real need for more doctors in a growing America. Another segment of Project MORE is the establishment of an even more personal bond between the exceptionally interested students and the local physicians. These "junior preceptees" are to be chosen from the top candidates in the high schools. These students will spend a day with their physician "preceptor" and will take part in his daily activities to the fullest and proper extent, including hospital rounds, visiting in his home, and to some extent observing normal office procedure, which will include demonstration and explanation of diagnostic and therapeutic aids that are available.

These interested students in the two areas in New York and Nebraska will prepare an essay outlining their experiences as a "junior preceptee" and their feelings toward a physician career. These essays will be given a \$1,000.00 scholarship to the medical school of his choice, to be held in trust until the time of his enrollment.

This new effort to stimulate our high school students to a medical career is admittedly in its infancy, but in the future, Project MORE will be expanded to include other areas of the United States and also much thought is being given to broaden the age group of students contacted to include both junior high students and also students enrolled in liberal arts colleges.

TEACHING SEMINAR

*Department of Medicine
University of Arkansas Medical Center
Little Rock, Arkansas*



SUBACUTE EROSIVE ESOPHAGITIS

*James H. Abraham, M.D.**

Probably almost everyone has experienced heartburn at one time or another. It can hardly be argued that this constitutes an abnormal or pathological phenomenon of any great significance in the vast majority of those in whom it occurs occasionally. However, in those people in whom heartburn is a regular and painful occurrence, this may be a symptom of a serious and progressive disease of the esophagus. Esophagitis is probably the most common disease of the esophagus and this disease may exist under a variety of circumstances. The type known as the "peptic", "reflux", or "regurgitant" form of erosive esophagitis is the most common form and is seen often enough in clinical practice to make a brief review worthwhile.

The etiology and pathogenesis of subacute erosive esophagitis is open to question. It is generally thought that regurgitation of acid peptic content into the lower end of the esophagus is responsible. This is not always true, however, as evidenced by the absence of reflux in some cases, and the fact that the material regurgitated is neither acid nor has peptic activity in others.

Perhaps stating that the pathogenesis and etiology may not be the same in all cases is the easiest way to beg the question. At any rate, the term "peptic" esophagitis would seem to be justified in most instances. Whatever the cause of subacute erosive esophagitis, there is a high degree of correlation between the occurrence of this disease and those factors which predispose to gastroesophageal reflux. (1)

The reported incidence of subacute erosive esophagitis varies greatly, but is probably higher than is generally appreciated. The criteria for inclusion in reported series certainly accounts for part of the difference. Lodge (2) found an incidence of 36 per cent in 500 unselected hospital autopsies (a select group in itself), and in 100 instances of sudden death she found 8 cases. In a survey of 20,000 autopsies Peters (3) found 116 cases of severe esophagitis, an incidence of 0.92 per cent. The author stated that undoubtedly many mild cases were not included.

Gastroesophageal reflux probably occurs in most people occasionally, but most of the time there seems to be a barrier of some kind which prevents reflux. The mechanism which normally

* Instructor in Medicine, University of Arkansas Medical Center
Little Rock, Arkansas

prevents reflux is incompletely understood at present. Anatomical studies often show a saccular dilatation of the distal few centimeters of the esophagus. This has been called the "gastroesophageal vestibule of expulsion" by Lerche (4). Studies of esophageal motility by Ingelfinger and associates (5) have shown that this vestibule has distinct physiological characteristics. Peristalsis from the body of the esophagus is not propagated immediately through the distal portion of the esophagus, and fluoroscopically one usually observes a temporary impediment to the flow of a barium bolus from this region into the stomach. The anatomical integrity of the structures in this area—esophagus, diaphragm and stomach—are just as important. Even though a true anatomical sphincter has not been demonstrated, a physiologic distal esophageal sphincteric mechanism seems to be present and it depends upon proper anatomical relationships for its normal function.

Of the factors contributing to the development of esophagitis, the sliding type of hiatus hernia seems to be the most frequent. It is this type of hiatus hernia which permits reflux of gastric content into the esophagus and accounts for the symptoms often found in this disorder. Regurgitation usually does not occur with the paraesophageal type of hiatus hernia. Gastric intubation often is incriminated as a cause of esophagitis. The presence of a tube in the esophagus and stomach perhaps interferes with the normal barrier to reflux, and the added factor of the recumbent position is probably equally important. Repeated vomiting is sometimes associated with esophagitis. Duodenal ulcer with obstruction and repeated vomiting of large amounts of gastric juice is cited as a cause of this disease. The symptoms of gastroesophageal reflux are more common during pregnancy, in extreme obesity, and in people who wear tight constricting corsets. It must be remembered, however, that neither reflux nor acid peptic juice need be present. The disease has occurred following operations for the correction of gastric hypersecretion, in patients who have a gastroenterostomy with alkaline reflux, and in achlorhydric patients.

Subacute erosive esophagitis manifests itself as a progressive disease. It has periodicity, just as duodenal ulcer has, but as time passes the symptoms tend to become more severe. Increasing heartburn, retrosternal pain and dysphagia are the predominant symptoms. The dysphagia oc-

curs at first on swallowing solid foods. Subsequently even liquids are swallowed with difficulty, and the patient loses weight. Inflammatory swelling and spasm probably cause the dysphagia at first, but subsequently fibrosis and stricture formation are important. Painful spasm of the esophagus may be brought on by drinking very cold water. Occasionally esophageal spasm causes retrosternal pain that resembles angina pectoris, and the prompt relief of this spasm and pain with nitroglycerine may add to the confusion. Patients who lie flat in bed for long periods may develop their first symptoms during this time. Patients who develop severe heartburn while lying in bed after a myocardial infarction may be suspected of having recurrent infarction until the head of the bed is raised. Esophageal spasm has been treated as myocardial infarction (6).

Bleeding is another prominent symptom in subacute erosive esophagitis. In the absence of actual ulceration of the esophagus, bleeding is usually slow and intermittent and may be unnoticed by the patient until symptoms of marked anemia appear. When ulceration occurs the bleeding is likely to be more dramatic and life-threatening. Schmidt (7) reported that, of a series of 170 patients with regurgitant ulceration of the esophagus, 38 had hematemesis, 20 complained of melena, and 16 reported that they had required blood transfusions; there were 3 fatal hemorrhages. Perforation of the esophagus is a catastrophic event, but fortunately this is an uncommon occurrence. It is interesting to note, however, that in Palmer's series of patients with primary esophageal ulcer (many of which were associated with hiatus hernia and with erosive esophagitis) treated by conservative measures, 3 developed electrocardiographic evidence of pericarditis (8). Esophageal ulceration commonly leaves fibrous stricture of the esophagus when healing occurs. Tracheobronchitis is an occasional complication of gastroesophageal regurgitation, and periesophagitis occurs as a result of recurrent episodes of subacute perforation (9).

The diagnosis of peptic esophagitis may be suspected clinically from the symptoms the patient presents. The presence of peptic ulcer in the duodenum or stomach may confuse the diagnosis. The pain of esophageal ulceration and spasm can mimic pain of cardiac origin and this should be borne in mind. The disease may be asymptomatic, and it can wax and wane rapidly.

The only way subacute erosive esophagitis can be diagnosed unequivocally is by esophagoscopy. By direct visualization one sees mucosal edema and redness, friable and bleeding mucosa, thickened longitudinal folds, granular denuded areas, erosion with membranous exudation, and ulceration in various combinations. Biopsy can be done at the time of esophagoscopic examination. Radiologic examination may give strong evidence of esophagitis, some of the possible findings being hiatus hernia, disorderly and ineffective esophageal peristalsis, esophageal shortening and thickening, spasm and stricture, mucosal irregularities and ulcerative changes (9).

Therapy of erosive esophagitis will be dictated by the status of the disease at the time the diagnosis is made and whatever complications may be present. In general, therapy is directed toward preventing reflux into the esophagus, controlling gastric hypersecretion, and reducing the acidity of the gastric contents. In mild or moderate degrees of esophagitis a trial of conservative treatment is warranted and is frequently successful in controlling symptoms and hindering the development of serious complications. Treatment is essentially the same as for duodenal ulcer, using a bland diet, antacids, milk and cream at frequent intervals (especially at bedtime), and anticholinergic drugs. In addition, patients are advised to avoid lying down for an hour or two after eating and to raise the head of the bed to prevent reflux. When edema and spasm are present and dysphagia is a symptom, bouginage

is frequently useful for gentle esophageal dilatation; prolonged treatment is necessary. Even though this form of management will be sufficient in many cases, surgery will often be necessary.

If it becomes apparent that conservative treatment is failing, surgery should be undertaken before extensive damage has been done to the esophagus and its surrounding tissues making surgery more difficult. Complications such as obstruction and uncontrollable hemorrhage are unequivocal indications for surgery. Although ulceration is treated conservatively in some instances, this also is considered a strong indication for surgery, especially in the presence of a hiatus hernia.

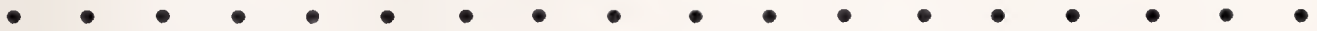
REFERENCES

1. Ingelfinger, F. J.: Disorders of Esophageal Motor Function. *Advances in Internal Medicine*, p. 11, Vol. VIII, 1956. Chicago, Year Book Publishers.
2. Lodge, K. V.: The Pathology of Non-Specific Oesophagitis. *J. Path. and Bact.* 69: 17, 1955.
3. Peters, P. M.: The Pathology of Severe Digestion Oesophagitis. *Thorax* 10: 269, 1955.
4. Lerche, W.: *The Esophagus and Pharynx in Action*. Springfield, 1950. Charles C. Thomas.
5. Ingelfinger, F. J., Kramer, P., and Sanchez, G. C.: The Gastroesophageal Vestibule, its Normal Functions and its Role in Cardiospasm and Gastroesophageal Reflux. *Am. J. M. Sc.* 228: 417, 1954.
6. Wooler, Geoffrey: The Diagnosis and Treatment of Peptic Oesophagitis. *Gut* 2: 91, 1961.
7. Schmidt, H. W.: Regurgitant Esophageal Ulcer. *Arch. Int. Med.* 96: 717, 1955.
8. Palmer, E. D.: Esophageal Ulcer in the Adult. *Arch. Int. Med.* 99: 695, 1957.
9. McHardy, G., McHardy, R., and Craighead, C. C.: Erosive Esophagitis. *GP.* 16: 75, 1957.



ELECTROCARDIOGRAM

OF THE MONTH



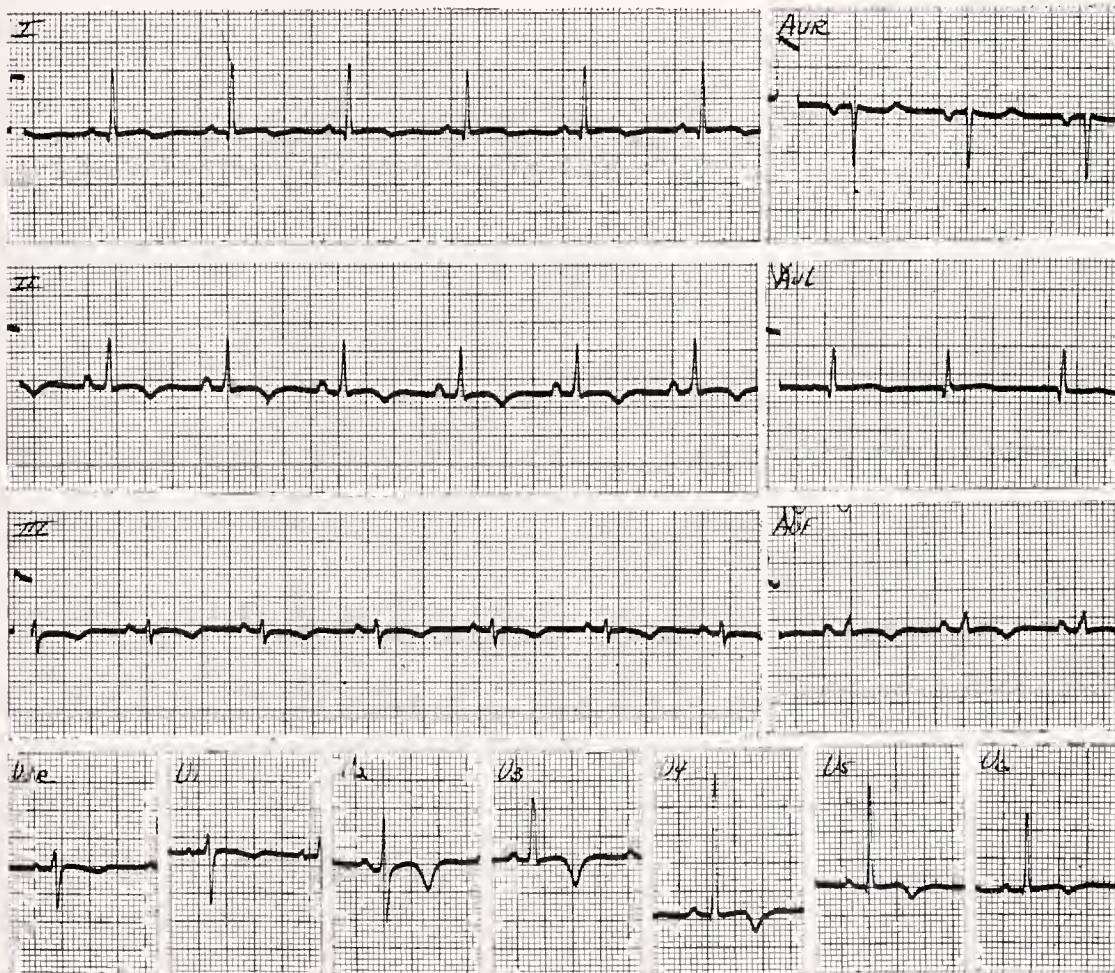
WHAT IS YOUR INTERPRETATION?

Age: 29 Sex: F Build: Slender Blood Pressure: 120/80

Medication: None

History: Chest pain accentuated by deep breathing.

Answer on Page 507



Prepared by J. S. Taylor, M.D., Professor of Medicine

The Department of Medicine

University of Arkansas Medical Center

Theragran[®]

SQUIBB VITAMINS FOR THERAPY

For your patients with infections or other illnesses who need therapeutic vitamin support. Each Theragran supplies the essential vitamins in truly therapeutic amounts:

| | |
|------------------------------------|---------------------|
| Vitamin A | 25,000 U.S.P. Units |
| Vitamin D | 1,000 U.S.P. Units |
| Thiamine Mononitrate | 10 mg. |
| Riboflavin | 10 mg. |
| Niacinamide | 100 mg. |
| Vitamin C | 200 mg. |
| Pyridoxine Hydrochloride | 5 mg. |
| Calcium Pantothenate | 20 mg. |
| Vitamin B ₁₂ | 5 mcg. |

SQUIBB



Squibb Quality—the Priceless Ingredient

'Theragran'® is a Squibb trademark

“nutrition...present as a modifying or complicating factor in nearly every illness or disease state”¹

1. Youmans, J. B.: Am. J. Med. 25:659 (Nov.) 1958

cardiac diseases “Who can say, for example, whether the patient chronically ill with myocardial failure may not have a poorer myocardium because of a moderate deficiency in the vitamin B-complex? Something is known of the relationship of vitamin C to the intercellular ground substance and repair of tissues. One may speculate upon the effects of a deficiency of this vitamin, short of scurvy, upon the tissues in chronic disease.”²

2. Kampmeier, R. H.: Am. J. Med. 25:662 (Nov.) 1958.

arthritis “It is our practice to prescribe a multiple vitamin preparation to patients with rheumatoid arthritis simply to insure nutritional adequacy . . .”³

3. Fernandez-Herlihy, L: Lahey Clinic Bull. 11:12 (July-Sept.) 1958.

digestive diseases Symptoms attributable to B-vitamin deficiency are commonly observed in patients on peptic ulcer diets.⁴ Daily administration of therapeutic vitamins to patients with hepatitis and cirrhosis is recommended by the National Research Council.⁵

4. Sebrell, W. H.: Am. J. Med. 25:673 (Nov.) 1958. 5. Pollack, H., and Halpern, S. L.: Therapeutic Nutrition, National Academy of Sciences and National Research Council, Washington, D. C., 1952, p. 57.

degenerative diseases “Studies by Wexberg, Jolliffe and others have indicated that many of the symptoms attributed in the past to senility or to cerebral arteriosclerosis seem to respond with remarkable speed to the administration of vitamins, particularly niacin and ascorbic acid. These facts indicate that the vitamin reserve of aging persons is lowered, even to the danger point, more than is the case in the average American adult.”⁶

6. Overholser, W., and Fong, T.C.C. in Stieglitz, E. J.: Geriatric Medicine, 3rd edition, J. B. Lippincott, Philadelphia, 1954, p. 264.

infectious diseases Infections cause a lowering of ascorbic acid levels in the plasma; and the absorption of this vitamin is reduced in diarrheal states.⁷

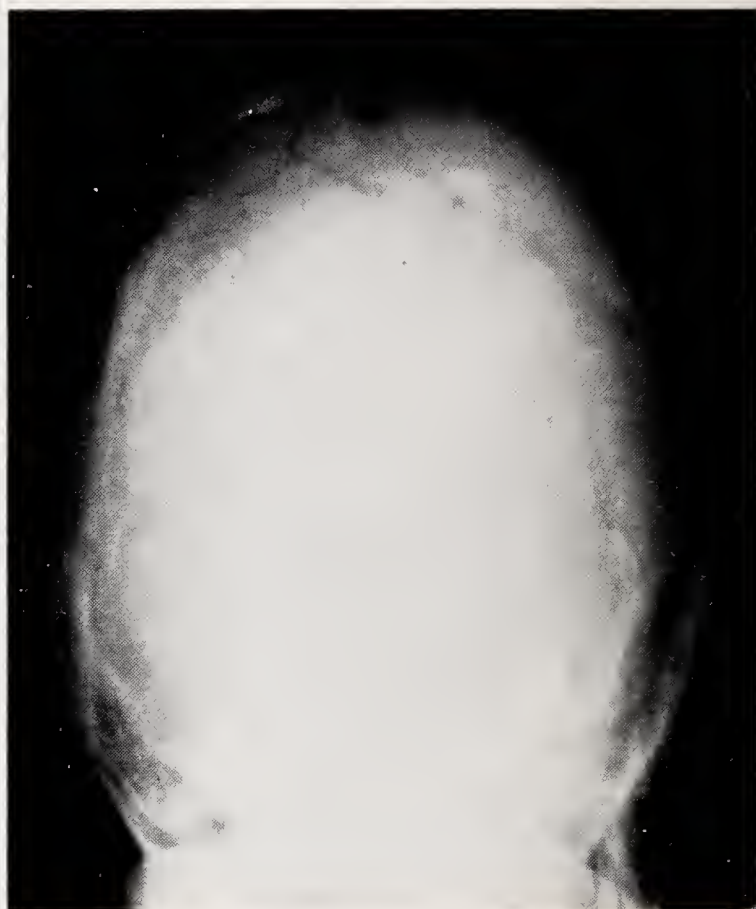
7. Goldsmith, G. A.: Conference on Vitamin C. The New York Academy of Sciences, New York City, Oct. 7 and 8, 1960. Reported in: Medical Science 8:772 (Dec.10) 1960.

diabetes Diabetics, like all patients on restricted diets, require an extra source of vitamins.⁸ “Rigidly limiting the bread intake of the diabetic patient automatically eliminates a large amount of thiamin from the diet. . . . There is some evidence of interference with normal riboflavin utilization during catabolic episodes.”⁹

8. Duncan G. G.: Diseases of Metabolism 4th edition W.B. Saunders, Philadelphia, 1959, p. 812. 9. Pollack, H.: Am. J. Med. 25:708 (Nov.) 1958.

FOR FULL INFORMATION SEE YOUR SQUIBB PRODUCT REFERENCE OR PRODUCT BRIEF. - -

WHAT IS YOUR DIAGNOSIS?



*Prepared by the
Department of Radiology, University of Arkansas
School of Medicine, Little Rock*

ANSWER ON PAGE 506



PUBLIC HEALTH AT A GLANCE

TULAREMIA

A case of tularemia, or "rabbit fever" was reported to the State Health Department on October 7, 1961. The patient was a 47-year-old white male, who lives 8½ miles southwest of Little Rock.

It happened that on August 27, 1961, the individual concerned cleaned, dressed, and cooked a rabbit that his dog had brought into the yard. The cooked rabbit was especially prepared for the dogs to eat. The patient had a small sore on his left forefinger at the time he cleaned and dressed the rabbit. It was through this break in the skin he became infected. The patient became ill on September 5, 1961, with a high fever, followed by chills. A primary lesion developed as a pustule at the site of the skin break on the left forefinger. In addition, the axillary lymph glands under the left armpit became enlarged and painful.

The patient was very ill for a period of nine days, and sufficiently incapacitated to be hospitalized for much of that time. *Pasteurella Tularensis* was isolated from pus taken from the infected left forefinger. Agglutination tests on his blood showed a higher titer, 1:5120.

Tularemia is often referred to as rabbit fever because of the long association of the disease with wild rabbits. Many other species of wild animals may be infected with tularemia such as squirrel, skunk, opossum, woodchuck, and muskrat. Four cases in dogs were reported in Arkansas in 1961. The disease passes from one animal to another and to humans by blood sucking insects such as ticks, flies, lice, and fleas. Most human cases of tularemia reported in Arkansas were traceable to the bite of a tick.

The records in the State Health Department indicate that tularemia has a wide distribution. A total of 60 human cases were reported in 27 counties during 1961. In the fall of the year when the hunting season starts, and more people enter the fields and woods, a rise in the incidence of tularemia usually occurs. The disease has a rapid onset, but complete recovery is quite slow. There is no vaccine to prevent the disease in man or animals. In former years the treatment for tularemia was very difficult but now a number of antibiotics are effective.

Every person whose work, employment, or recreation is such that exposure to tularemia may occur should be acquainted with and follow certain protective measures. These measures are:

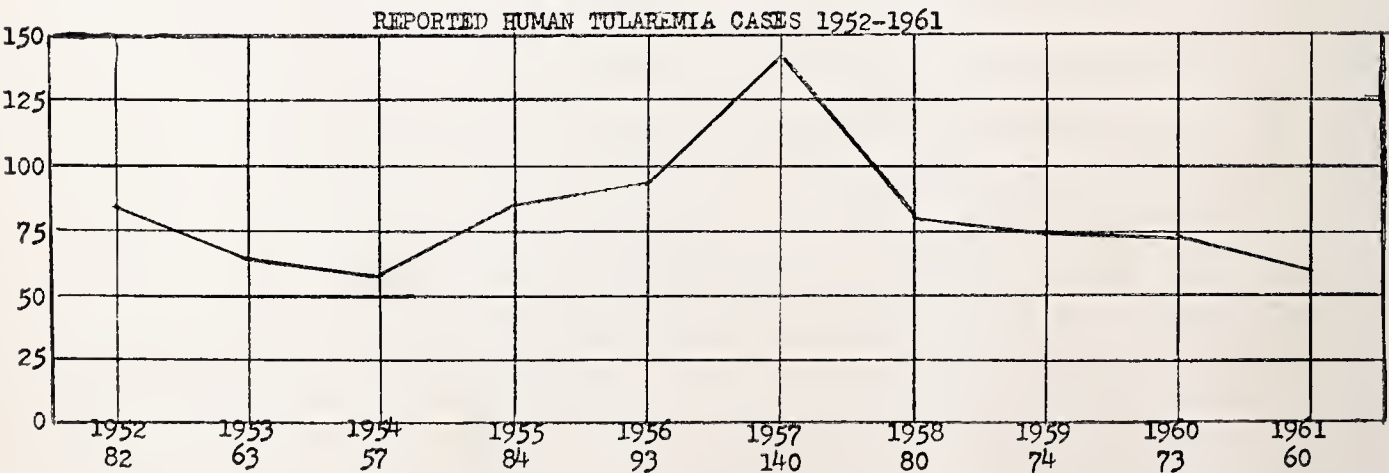
1. Avoid handling sick or sluggish wild animals; an animal found dead, one brought in by a dog or cat should also be avoided.
2. Exercise the greatest of care when cleaning wild game. Use disposable rubber or plastic gloves for cleaning and processing game. Don't splash the blood. *Keep hands away from eyes.* The housewife who cooks the game should also be careful because refrigerated game may still be infectious. Wash hands and arms with plenty of warm water and soap after cleaning and handling raw game.
3. Reject for use and destroy by burning or burying game with abscesses or spots on the liver. Even when enlarged glands or spots on the liver are not present one should be careful because the animal may still have tularemia.
4. Cook all wild game until well done; no redness or red juice should remain in the meat.
5. Protect against bites of insects, such as ticks

and deer flies, which may transmit the disease, by use of repellants and suitable clothing. Avoid handling or squashing such insects. After each trip into the woods and fields, examine yourself carefully for the presence of ticks. Remove any ticks without squashing.

6. Do not drink raw water from springs or streams in the woods because the stream may be

contaminated with tularemia germs. Contaminated water is another manner in which the disease may be acquired.

Tularemia is widely distributed throughout the world. The disease has been reported from Canada, forty-six states of the United States, and the District of Columbia.





EDITORIAL

"WHITHER THE ARKANSAS HOSPITAL"

Alfred Kahn, Jr., M.D.

THE CHANGING POLITICAL and social climate of this era in the United States is manifesting itself in many facets of the health programs in this state, and as is often the case in a changing pattern of philosophy the symptom or outward expression is often mistaken for the disease. Furthermore, although the problem may be recognized in its entirety, solutions are not always available. This situation is particularly true with the hospitals of Arkansas, and elsewhere.

For example, Great Britain has a system of socialized medicine which is abhorrent to us in American Medicine. One of the side effects of "so-called" free medical care plan of Britain is the relative lack of hospital beds. We in America have correctly fostered private health insurance programs, including hospitalization and now we are faced with the same dilemma. It is ironical that two opposing philosophical systems have brought about a similar result. This begs a question for which there does not seem to be a clear cut answer, namely, is the supply of hospital beds adequate for the truly sick or are the hospitals overcrowded because of a desire to use a hospital insurance policy instead of the physician's office. If this conception is correct, then the cost of the insurance premium is going to go too high for many families to afford private insurance—a low cost insurance program is gambling statistically that most people are not going to require hospitalization except at infrequent intervals; the

other flaw is that the lightly ill will crowd the facilities so that the seriously ill cannot be admitted. The situation involves itself into deciding if in this state there are enough hospital beds but too many lightly ill folks hospitalized, or if there is a true shortage of hospital beds in which case a substantial financial outlay for new beds should be made. There is no question but what the American public wants and needs private hospitalization policies but it also seems to have a tendency to shy away from services offered in the physician's office which in the long run is economically sounder as it is less expensive than an exorbitantly high hospitalization policy.

Geography has added another dimension to the overall medical and hospital problem. A few years ago, hospitals were available only in the larger cities. Now, most smaller communities have a clinic and many have small but finely equipped hospitals. These hospitals are necessary to provide the out-of-city dweller with adequate health protection in the presence of serious infection, trauma, emergency surgery, obstetrics, pediatric care, and major medical catastrophes to name a few of their functions. The development of these hospitals must be recognized by our medical educators as a prime reason for developing an excellent general practice program designed to fit the needs for Arkansas, and this certainly implies surgical training. Mangling traffic and farm accidents happen in smaller communities; emergency

surgery of all types occur in smaller communities; the general physicians in Arkansas are handling these cases competently and ably. Continuing excellent training in the field of general medicine is necessary for these hospitals to function to their maximum advantage to the community. In the field of post graduate training, the Arkansas Academy of General Practice has done a fine job.

The growing excellence of the satellite hospitals in the smaller communities raises the question of what is the function of the hospital in the larger city. Manifestly, there are two groups of patients that need care. Firstly, there are the sick of the large city. Secondly, and of equal importance, is the need for the large city hospital to take care of the problem cases referred by the physicians from the smaller communities. In the largest sense the hospitals in bigger cities are the service areas of the smaller communities and for the welfare of the sick patient from the rural areas admission should be made easy—they are both sick and strangers; and it also should be remembered that the busy general physician cannot always provide the hospital, through the referral physician in the cities, with much advance notice of the patient's arrival. Some problems arise from this dichotomy of hospital function. Can a single institution function well as both a community hospital and as a service hospital for smaller hospitals? The answer should be yes, for if not, separate institutions will have to cater to the different needs.

The internal organization of hospitals is also worthy of continuing reappraisal by the physician if an efficient, effective hospital is desired. This quality of medical practice is being stressed and this is paramount for the patient. Frequent obligatory staff meetings which harry and tire the practicing physician does not lead to better patient care; many physicians prefer to stand in the shadow of their colleagues who are interested in effective hospital administration. No good comes from compulsory attendance of an administratively disinterested physician to perfunctory attend meetings. Rights in the hospital are often disputed privately but are seldom openly aired, as should extra consideration be given to the principal long term user of the hospital in contrast to the infrequent user, or newer arrival? Should there be a unilateral, bilateral, or tri-partate con-

trol of the hospital; in other words should there be an administrator with sole authority to plan and execute the hospital's destiny; should the hospital administration be controlled equally by the professional staff and the administrator; or should there be equal voice from the administrator, the professional staff and a lay board which represents the thinking of the community. Since many hospitals lack a real continuity in the office of the administrator, a professional staff with equal rights in deciding the destiny of the hospital, a lay board to represent the public would seem to be both wise and necessary. If government moneys are used for construction or other purposes, a lay board can often help the administrator and professional staff in both obtaining funds and in tailoring their use to the community's needs.

Considerable thought and planning for hospitalization of the infirm aged is necessary. The established hospitals can best fulfill this need. The extension of life expectancy has not been accompanied by equal preservation of function in the aged; some are blind but think clearly; others have disorders of locomotion; still others have sound bodies with mental deterioration. These older people require more medical attention than the middle aged and young groups and should be near medical facilities but they do not need to tie up specialized hospital facilities of their community hospital. The appropriate solution could be in a special building on the grounds of the hospital so that the X-Ray Department, the laboratory facilities, and other hospital services are available nearby with duplication. This is an area in which much research could be conducted in a private institution as public teaching hospitals do not have this type of patient.

There is no pat formula for the solution of the hospitals' problems, but one thing is self-evident. The physicians should take more interest in deciding on long-range hospital professional planning in their community role in the hospitals internal function, in other words, the strategic planning; it would relieve the physician of a great deal of the day to day tactical considerations which may be properly disposed of by the hospital administrator, in addition to their important role as operator of the hospitals physical plant.

ABSTRACTS

Peptic Ulcer in Primary Hyperparathyroidism: Analysis of 52 Cases—W. T. Wilder, B. Frame, and W. S. Haubrich

Ann Intern Med—Vol. 55:885 (Dec.) 1961

Analysis of 52 cases of hyperparathyroidism associated with peptic ulcer collected from various sources led to the following conclusions: (1) There is a relatively increased incidence of females presenting with the associated diseases. (2) In 23 of the 52 patients, 10 to 20 years of ulcer disease elapsed before hyperparathyroidism was diagnosed. In 23 of 37 cases (where adequate data were available) peptic ulcer was the earliest symptom complex that could retrospectively be attributed to hyperparathyroidism. (3) There is a relatively increased incidence of gastric ulcer in the associated disease. (4) Most patients had an unusually chronic and episodic course of the ulcer disease with amelioration of the ulcer disease after parathyroid surgery. (5) There is a relatively increased incidence of parathyroid hyperplasia where ulcer is associated with hyperparathyroidism. Recognition of peptic ulcer disease in some instances was of greater value than that of renal stones in arriving at an early diagnosis of hyperparathyroidism.

Cat-Scratch Disease: Complement Fixation and Skin Test Results—S. S. Kalter

Ann Intern Med—Vol. 55:903 (Dec.) 1961

Serological and skin-testing data on patients with cat-scratch disease are presented in an attempt to demonstrate some possible relationship to the psittacosis-lymphogranuloma venereum group of virusus. In addition, the results of skin-testing patients with different batches of skin-test antigen are given. The incidence of positive serological reactions with this group antigen was consistently higher than with the control group. However, the percentage positive is not what would be expected from any direct causal rela-

tionship. The response of groups of individuals to different preparations of skin-testing antigen was so variable that the results suggest that either more than one agent may be involved or that marked strain variations must occur among the agents producing this clinical syndrome. Two of 5 patients with lymphogranuloma venereum did not respond with positive skin reactions when tested with cat-scratch antigen, and at least 2 of the remaining 3 responded in a manner open to questionable interpretation.

"Purple Toes": Uncommon Sequel of Oral Coumarin Drug Therapy—W. Feder and R. Auerbach

Ann Intern Med—Vol. 55:911 (Dec.) 1961

Cutaneous vascular lesions following anticoagulant therapy with coumarin derivatives occurring in 6 patients are described. The lesions consisted of a dark blue-tinged bilateral purple discoloration of the feet, especially the plantar surfaces and the sides of the first two toes. This was sometimes preceded or accompanied by a red-tinged violaceous nondescript discoloration of the thenar and hypothenar eminences of the hands. These lesions had the following in common: (1) they developed 3-8 weeks after the patient was started on treatment with either bishydroxy-coumarin (Dicumarol) or warfarin; (2) at the time the lesions appeared, the prothrombin times (1 stage Quick method) were all in the therapeutic range (1.75 to 2.5 times the control time), and there was no clinical or laboratory evidence of epistaxis, hematuria, blood in the stools, hemoptysis or other type of hemorrhage; (3) the color blanched completely on moderate pressure, (4) the color faded but never disappeared on elevating the legs 90° from the horizontal; (5) the toes were both symptomatically painful and tender on palpation; (6) the intensity of the discoloration and tenderness waxed and waned, but the color changes persisted indefinitely.

MEDICINE IN THE



SMH Auxiliary Hears Little Rock Plastic Surgeon

Dr. James G. Stuckey, Jr. Little Rock plastic surgeon spoke at a general meeting of Stuttgart Memorial Hospital. The supper meeting was held in the new hospital dining room.

Dr. Stuckey was born in Lepanto, is married and has four children. He is a graduate of Baylor Military School, Chattanooga, Tenn. and received a bachelor of science degree from the University of Arkansas in 1943 and his M.D. in 1946 at the university. After a rotating internship in St. Louis, Mo. City Hospital, he served as flight surgeon in the USAF, 1947-49, and returned to the St. Louis Hospital for two more years as interne, then two years as assistant resident in surgery. In 1953-54, Dr. Stuckey served Washington University in Barnes Hospital, St. Louis, as a fellow in plastic surgery, and 1955 became a resident in the same field at Barnes.

He has been in private practice, specializing in plastic surgery in Little Rock since 1955. He is a member of several medical societies and organizations and has teaching connections with more than half dozen hospitals and institutions. He is a diplomat of the American Board of Surgery (1957) and the American Board of Plastic Surgery (1958).

* * * *

Hospital Staff Hears Hematology Authority

Dr. Joseph M. Hill of Dallas, an authority on hematology spoke to the medical staff at Arkansas Baptist Hospital on "Uses and Abuses of Blood and Its Products." Dr. Hill is dean of the graduate research institute of Baylor University of Dallas and director of the J. K. and Susie L. Wadley Research Institute and Blood Bank also at Dallas. He is chief of the section in hematology at Baylor University Hospital and clinical professor in pathology at the University of Texas Southwestern Medical School.

Dr. Hill was one of the founders and first president of the International Society of Hematology and helped to found the American Society of Hematology.

* * * *

Texas Doctor Named to Fill Hospital Post

Dr. B. Ainsworth Kuehne of Austin, Texas has been appointed assistant superintendent at the Little Rock Unit of the State Hospital. Dr. Kuehne was chief instructor in psychiatry at the Austin State Hospital. He filled the position of Dr. Hayden H. Donahue, who was assistant superintendent. Dr. Donahue resigned to take a position in Oklahoma. Dr. Granville L. Jones, who was to move from superintendent to assistant superintendent when Dr. Jackson arrived, also resigned to take a position in New Jersey.

Dr. Kuehne, a native Texan, received his bachelor's degree at the University of Texas and a doctor's degree at the Medical Branch of the University of Texas at Galveston. He completed his internship at the Gallinger Municipal Hospital at Washington and has a year of psychiatric residency at Galveston State Psychopathic Hospital and two years as a resident in psychiatry at the New Orleans Charity Hospital.

Dr. Kuehne was certified in psychiatry by the American Board of Psychiatry and Neurology in 1957 and is a member of the American Medical Society, the American and Texas Psychiatric Societies and the Mental Health Society.

* * * *

Best Papers in Southwestern Medicine to Receive Awards

A total of five hundred dollars will be awarded annually for the best original scientific articles to be published in Southwestern Medicine starting with the January, 1962 issue.

The contest for the first year, 1962, will close on Sept. 1, 1962, so that judging can be completed and awards made at the 44th annual meeting of

the Southwestern Medical Association in Albuquerque, N. M., October 18-20, 1962. From that date, the contest will run from Sept. 1, to Sept. 1 of each year.

The awards will be made in two classifications: Regional and National. All physicians who practice in West Texas, Arizona, New Mexico, Nevada or Northern Mexico (States of Sonora and Chihuahua) will be eligible to compete for the Regional Awards. All physicians in the United States outside the Regional area may compete for the National Awards. Only original scientific articles published in *Southwestern Medicine* will be eligible. Contributions must be written in English. They must be typed, double spaced and on one side of paper only. A stamped, self-addressed envelope must be included with each paper to insure return of rejected manuscripts.

All papers should be submitted to Lester C. Feener, M.D., Editor, 310 North Stanton Street, El Paso, Texas. As with all official medical journals, only those papers found acceptable by the board of editors of the journal will be published.

Arrangements are being made with the American Medical Writers Association to appoint a panel of judges who will make the annual selection of the best published papers.

* * * *

THE MONTH IN WASHINGTON

Washington, D. C.—The American Medical Association again endorsed a legislative proposal that the federal government help finance construction of new medical schools and expansion and modernization of existing ones.

Dr. Gerald D. Dorman of New York City, a member of the A.M.A. Board of Trustees, told the House Interstate and Foreign Commerce Committee:

"We believe that there is need for assistance in the expansion, construction and remodeling of the physical facilities of medical schools, and, therefore, a one-time expenditure of federal funds on a matching basis is justified, where maximum freedom of the school from federal control is assured."

Dr. Dorman was presenting the A.M.A. position on the Kennedy Administration's 10-year, \$932 million program (H.R. 4999) for federal aid to medical education. The legislation also proposed scholarships for medical and dental students.

"If the high standards of medical education

are to be maintained, increased attention must be given to the adequacy of physical facilities, the availability of qualified instructors and the availability of teaching material and patients for the clinical phases of medical education," Dr. Dorman said. "Any attempt to increase the number of medical students without regard to these conditions will result in a lowering of the standard of medical education. At this time, priority should be given to an increase in the physical facilities available for medical education."

Dr. Dorman said the A.M.A., had not taken a position on the other sections of H.R. 4999. However, he reviewed related A.M.A. programs,

"For some time, the American Medical Association has been aware of the decline in the number of eligible college students seeking admission to medical schools," he said. "This apparent shift away from medicine is due, in part, we believe, to the high cost in time and money of securing a medical education. This trend has been accentuated by a dramatic emphasis on careers in science and engineering. . . .

"The House of Delegates of the American Medical Association in November, 1960, established two programs, the objectives of which are complementary and interrelated.

"First, the House authorized a student honors and scholarship program designed to focus attention on careers in medicine, to attract a substantial group of able students to prepare for admission to medical schools and to assist financially a limited number of outstanding students who, for financial reasons, are unable to pursue a career in medicine.

"Second, the A.M.A. House of Delegates has adopted a student loan program designed to alleviate the financial difficulties of medical students and to encourage career decisions in favor of medicine."

Dr. Dorman also pointed out that the A.M.A. in the past 10 years, in collaboration with the Association of American Medical Colleges, had aided interested organizations in the establishment of six new medical schools. "Currently, commitments have been obtained for another five schools and we are in consultation with sixteen institutions or organizations presently contemplating the establishment of new medical schools," he added.

* * * *

The A.M.A. said it would be irresponsible to

combine the King-Anderson bill with legislation that would permit physicians and other self-employed persons to defer federal income tax on income placed in specified private retirement funds.

Sen. Clinton P. Anderson (D., N. M.), co-author of the King-Anderson bill which would provide limited health care for aged persons under social security, suggested the combining tactic during a televised debate on the medical care issue with Sen. John Tower (R., Tex.).

The private retirement legislation—H.R. 10, the Keogh bill—would extend to an estimated 11 million self-employed and their employees the same tax benefits now provided to about 20 million wage earners covered by 66,000 company pension plans.

"This 'doubling-up' proposal of Sen. Anderson certainly proves the insincerity of the King-Anderson bill," Dr. F. J. L. Blasingame, Executive Vice President of the A.M.A., said. "It lays bare the fact that this is wholly a political issue and not a sincere attempt to grant meaningful medical care for the aged.

"It would be an irresponsible bit of legislative slight of hand to combine Sen. Anderson's proposed compulsory medical care program with a bill to eliminate tax inequities inflicted on the self-employed.

"Such unwarranted action could only serve Sen. Anderson's own political ambitions at the expense of millions of Americans.

"The bills have nothing in common. There is no reason whatsoever for combining them except that Sen. Anderson is attempting to harass critics of his bill into silence.

"He even calls the Keogh bill the 'doctors' special pension program, ignoring the fact that doctors make up only about 2.6 per cent of those self-employed who would be getting tax equity."

The Keogh bill has received widespread bipartisan support in both houses of Congress. It was passed by an overwhelming vote in the House last summer and cleared the Senate Finance Committee by 13-3 vote.

* * * *

Rebsamen Memorial Hospital Dedicated

Rebsamen Memorial Hospital was dedicated and a crowd estimated at 1,500 braved bad weather to visit the facility to see for themselves the fine facilities there for the care of those unfortunate enough to have to go to the hospital. The dedi-

cation and ribbon-cutting ceremony was held with Mayor Harden Raymond Rebsamen, W. W. Nixon, Jr., cutting the ribbon. Dr. Dale Alford, congressman from this district, made the principal address.

In dedicating the hospital, Dr. Alford complimented the people of the Jacksonville community on their progressive action in building and furnishing the hospital. He noted that the patients who came there for care would be free to select the doctor of their choice and compared that to the system of socialized medicine such as they have in England.

* * * *

Med School Researcher Gets \$250

Miss Martha Allis, executive secretary, Pulaski County Tuberculosis Association announced the association had contributed \$250 to the research activities of Dr. W. Ted Kniker, assistant professor of pediatrics, University Medical School. Dr. Kniker is a research Fellow with the American Thoracic Society, the medical section of the National Tuberculosis Association.

THINGS TO COME



Annual Otolaryngologic Assembly to be held in Chicago

The annual Otolaryngologic Assembly is to be held in Chicago on October 20 through 26, 1962. The University of Illinois College of Medicine Department of Otolaryngology will offer an intensive postgraduate basic and clinical program under the direction of Doctor Emanuel M. Skolnik. This Assembly for practicing otolaryngologists offers a condensed program of one week of daytime and evening sessions. It is designed to bring to specialists a wide variety of current advances in management, therapy and philosophies. Review of basic morphologic features under the direction of Doctor Maurice F. Snitman and Doctor Frederic J. Pollock is also included, and will feature laboratory demonstrations and prosecution, all augmented by visual aids.

Panel sessions have been designed to bring out special features of otologic and reconstructive surgery and tumors of the head and neck. Luncheon chats are an important part of the daily instructional program.

Interested physicians should direct communications to the Department of Otolaryngology, University of Illinois College of Medicine, 1853 West Polk Street, Chicago 12, Illinois.

* * * *

15th Koppa Conference to be held in Texas

15th Koppa Conference on Pulmonary Diseases, September 6-9, 1962, Camp Waldemar, Hunt, Texas. Wayne E. Reser, M.D., 1504 8th Street, Wichita Falls, Texas, Invitation Chairman. All interested in attending please write Dr. Reser. Everyone is welcome.



OBITUARY

Death Takes Prominent Physician

Dr. Harry E. Murry, 67, prominent Texarkana physician, died in a local hospital. He suffered a stroke and had been confined to the hospital about two weeks before his death.

Dr. Murry was born August 6, 1894 at Bearden, Arkansas and graduated from Texarkana, Arkansas high school. He took pre-med work at the University of Arkansas and graduated from Tulane University serving his internship at Turo Infirmary and Charity Hospital in New Orleans.

He was a member of the First Methodist Church, Arkansas, the Arkansas State Medical Society, the American Medical Association and the Southern Medical Association. He was a past president of the Arkansas Academy of General Practitioners and a member of the Texarkana School Board.

ABSTRACTS

Protein-Losing Disorders of Gastrointestinal Tract: Roentgen Features—R. H. Marshak, B. S. Wolf, N. Cohen, and H. D. Janowitz
Radiology—Vol. 77:893 (Dec.) 1961

Significant amounts of protein may leave the body via the gastrointestinal tract. The present paper classifies such protein-losing disorders into 2 categories: (a) Primary, including exudative gastropathy (Ménétriére's disease) and the exudative enteropathy of Gordon. (b) Secondary, associated with ulcerative, inflammatory, and neoplastic disorders of the gut and primary malabsorptive states. In Ménétriére's disease, the most striking roentgen findings are giant folds in the stomach, especially on the greater curvature, where they resemble cerebral convolutions. There is no evidence of ulceration, rigidity, or nodularity. The bowel wall may be thickened and the lumen narrowed by the enlarged folds. In one form of the disease, nodules are seen projecting into the gastric lumen. The small intestine and colon may be involved as well as the stomach, showing thickened folds which are sometimes coarsely nodular. In the colon multiple polyps are identified. In the exudative enteropathy of Gordon there may be coarsening of the intestinal folds associated with minimal dilatation and increased secretions. The secondary forms of the condition show no roentgen findings other than those associated with the underlying disease process.

Retinopathy and Neuropathy in 100 Growth-Onset Diabetic Patients—R. T. Collyer and B. E. Hazlett

Canad Med Ass J—Vol. 85:1328 (Dec. 16) 1961

The results of detailed neurologic and ophthalmologic examination in 100 growth-onset diabetics ranging in age from 14 to 52 years, and in duration from 4 to 38 years, are reported from the Toronto General Hospital. Seventy-eight per cent of these patients had some evidence of retinopathy and 52% some evidence of neuropathy. Severe neuropathy did not follow the pattern of increasing severity with increasing duration accelerated by poor control, set by other "complications"; it was affected primarily by control. It was felt that "diabetic angiopathy" was responsible for the various stages of retinopathy and for the less severe asymptomatic grades of neuropathy, but that severe diabetic neuropathy had a different etiologic basis.



PERSONAL AND NEWS ITEMS

Dr. Harrison Receives Marine Award

Dr. R. K. Harrison prominent Texarkana physician and surgeon recently was presented an Appreciation Certificate from the Texarkana Marine Corps Reserve Unit. Dr. Harrison, a retired Lieutenant Colonel in the Army Reserve Medical Corps, was cited by the Marines for Medical services performed for members of the local reserve, acting as that unit's examining physician on a voluntary basis for the past three years. He retired recently from the Medical Corps after 20 years of service.

* * * *

Arkansas TB Staff Physician Helps Kick Off Arsenal Drive

Dr. C. H. Ahn, staff physician at the Arkansas Tuberculosis Sanatorium in Booneville spoke at Pine Bluff Arsenal's post theater to open the installation's annual fund drive in support of the Federal Service Joint Crusade and the Federal Service Campaign for the National Voluntary Health Agencies.

Ahn, who has been at the TB Sanatorium since 1957, was born in Korea in 1918. After graduating from Tae-Gu Normal School in Korea, he was a school teacher for 3 years before entering medical school. He graduated from Severance Medical College in Seoul in 1947. This school was established by American Christian missionaries about 70 years ago. Before leaving Korea in 1954, Ahn was a member of the medical team of the American-Korean Foundation and the TB Controller of the Republic of Korea. He became a fellow of the American College of Chest Physicians in 1956 and was trained in chest diseases at Sea View Hospital in New York before coming to Arkansas.

Resident Doctor Named at LR Unit of State Hospital

Dr. Gene D. Moore is a new resident in psychiatry at the Little Rock Unit of the Arkansas State Hospital. He began his training according to George W. Jackson, hospital superintendent. Dr. Moore is a native of Louisiana and obtained his BS degree and premedical study at Northeast Louisiana State College, Monroe, and secured his MD degree at LSU School of Medicine, New Orleans. He is a member of the American Academy of General Practice.

* * * *

Dr. David Elected Chief of Staff

Dr. N. C. David was elected Chief of Staff of Mercy Hospital—Brinkley, at a staff meeting held at the hospital. Dr. W. L. Walker was elected vice president and Dr. J. P. Williams was named secretary. Other members of the Staff are Dr. E. D. McKnight and Dr. M. L. Dalton.

* * * *

Dr. Caffery to Head Hospital Medical Staff

Dr. Eldon L. Caffery has been chosen chief of medical staff at St. Bernard's Hospital for 1962. Dr. H. C. Barnett is the new vice chief of staff and Dr. Bascom P. Raney is staff secretary-treasurer for the Jonesboro hospital. Dr. Caffery became a member of the St. Bernard's staff in 1958. For two years prior to coming to Jonesboro, he was assistant professor of surgery at the Medical College of Georgia. He is a graduate of the University of Tennessee School of Medicine.



PROCEEDINGS OF SOCIETIES

Washington County Medical Assistants Install Officers

Dr. Friedman Sisco of Springdale installed officers at the dinner meeting of the Washington County Medical Assistants in the dining room of Mountain Inn Motor Lodge. Officers installed were Miss Glenn Stockburger, president; Lena Foren, vice president; Nona Allen, treasurer; Jo Maud Hamm, secretary; and Claudia Thornsby parliamentary.

* * * *

Fifth Councilor District Medical Society Meets

The Fifth Councilor District Medical Society met in the Rufus Garrett Hotel, El Dorado, Arkansas. Officers elected for the year 1962 were Dr. W. B. Ellis—President; Dr. W. S. Rainwater—Vice President; and Dr. John E. Alexander—Secretary. Dr. John L. Ruff was elected Fifth District Councilor. The speaker for the evening was W. M. Sheppard—Vice President of the Arkansas Power and Light Company.

* * * *

Dr. H. W. Thomas New Head of S.E. Ark. Medical Group

At a meeting of the Southeast Arkansas Medical Society, held in the Gocio Hotel at McGehee, Dr. H. W. Thomas of Dermott was elected president and Dr. Lee Parker, Jr. of McGehee was re-elected secretary. Dr. R. L. McDonald of McGehee is the retiring president.

* * * *

Dr. Lee Elected President of Medical Group

Dr. Fred Lee has been named president of the Columbia County Medical Society and Chief of the Medical Staff at the City Hospital for 1962. Lee was elected at the joint meeting of the society and the medical staff of the hospital. Other offi-

cers elected include Dr. Jack Walker to the vice presidency; Dr. John Ruff—secretary-treasurer and Chief of Obstetrics and Pediatrics.

* * * *

Contributors to the American Medical Education Foundation from the State of Arkansas during January, 1962:

| | |
|---|-----------|
| H. King Wade, Jr., Hot Springs | \$ 10.00 |
| H. King Wade, Sr., Hot Springs | 50.00 |
| Robert J. Thompson, Fort Smith | 25.00 |
| H. W. Thomas, Dermott | 20.00 |
| Wm. A. Snodgrass, Jr., Little Rock | 10.00 |
| Wilma Sacks, Fayetteville | 25.00 |
| Oliver P. Sizemore, Magnolia | 5.00 |
| M. H. Scott, Fort Smith | 5.00 |
| Guy U. Robinson, Dumas | 100.00 |
| Walter H. O'Neal, Little Rock | 5.00 |
| Joseph A. Norton, Little Rock | 25.00 |
| F. M. Lockwood, Fort Smith | 5.00 |
| Morris A. Jackson, Little Rock | 10.00 |
| Louise M. Henry, Fort Smith | 25.00 |
| John T. Gray, Jonesboro | 10.00 |
| J. E. Gill, Texarkana | 25.00 |
| John C. Faris, Jonesboro | 10.00 |
| George J. Fotioo, Hot Springs | 5.00 |
| Frances M. Doren, Smackover | 6.00 |
| Wm. G. Cooper, Jr., Little Rock | 5.00 |
| Mrs. Hershel Wilmoth, Glenwood | 3.50 |
| Columbia County Medical Auxiliary | 5.00 |
| Mrs. J. H. Chesnutt, Hot Springs | 50.00 |
| Benton County Medical Auxiliary | 5.00 |
| Hempstead County Medical Auxiliary | 9.00 |
| Jefferson County Medical Auxiliary | 20.00 |
| Union County Medical Auxiliary | 3.00 |
| Willis-Yates Drug Company, Magnolia | 105.00 |
| Euclid M. Smith, Hot Springs | 5.00 |
| Mose Smith, Little Rock | 25.00 |
| | ----- |
| | \$ 611.50 |



NEW MEMBERS

A new member of the Pulaski County Medical Society is DR. ROBERT A. BURGER. He is a native of New York City and received his preliminary education at College of City of New York located at New York, New York, from which he received a B.S. degree. Dr. Burger's M.D. degree was received from the University of Arkansas School of Medicine in 1941. He practiced in North Little Rock from 1946-1950; Houston, Texas from 1950-1953; Gary, Indiana from 1953-1961. His specialty is pathology and he is now located at the Arkansas Baptist Hospital, Little Rock, Ark.

* * * *

DR. PAUL ALLEN WALLICK is a new member of the Drew County Medical Society. Dr. Wallick is a native of Monticello, Arkansas, and he received his preliminary education at Arkansas A & M located at Monticello from which he received a BS degree. His medical education was obtained at University of Arkansas Medical School from which he graduated in 1958. He has served two years with the U.S. Air Force. Dr. Wallick's office is located at 216 South Main in Monticello, Ark.

* * * *

The Randolph County Medical Society announces that DR. HAL S. BARRE has been added to its roster of members. Dr. Barre is a native of Memphis, Tennessee, and his preliminary education was obtained from the University of Tennessee located at Memphis, Tennessee. He received his M.D. degree from the University of Tennessee in 1960. His internship was completed at St. Joseph's Hospital in Memphis. Dr. Barre has his office at 309 West Broadway in Pocahontas, Arkansas.

DR. DONALD T. NEBLETT has been accepted for membership in the Craighead-Poinsett County Medical Society. He is a native of Clarksville, Tennessee, and he received his preliminary education at the University of Tennessee located at Memphis. He received his M.D. degree from the University of Tennessee in 1958. Dr. Neblett's specialty is pediatrics and his office is located at 826 Cobb Street in Jonesboro, Ark.



Women's Auxiliary

U of A Auxiliary Meets

The University of Arkansas Medical Auxiliary met in the Jeff Banks Student Union Building. Mrs. Gordon Oates, president presided. Harry Hinton of Chicago, Ill., field representative of the American Medical Association was the speaker. Mrs. Mason Lawson was program chairman. R. C. Hardy, hospital administrator, presented pins representing 100 hours of volunteer service to Mrs. Homer Latimer and Mrs. Joseph McGowen. Volunteer workers demonstrated their various fields of activities during the refreshment hour.

The Auxiliary was host to the Central District Medical Meeting in the Jeff Banks Student Union Building. The theme was "Hospital Auxiliaries in the Changing World." Mrs. Oates moderated a panel discussion.

ANSWER—What Is Your Diagnosis?

19 MONTHS OLD COLORED FEMALE

There was asymmetry of the head since birth but no other symptoms. **DIAGNOSIS:** Craniosynostosis or plagiocephaly due to premature closure of the right coronal suture.

X-RAY FEATURES: The right coronal suture is not visible on any of the films. There is asymmetry of the skull which diminished size of the cranium on the right side as well as slight brachycephaly. The right orbit is in this case and characteristically somewhat elliptical in configuration.



BOOK REVIEWS

TEXTBOOK OF ENDOCRINOLOGY, Edited by Robert H. Williams, M. D., Chief, Endocrinology and Metabolism Division, and Physician-in-Chief, University Hospital; Executive Officer and Professor of Medicine, University of Washington Medical School, Seattle, Washington, Third Edition, illustrated, pp. 1204, published by W. B. Saunders Company, Philadelphia and London, 1962.

This is now a standard textbook of endocrinology. It is written by a number of outstanding contributors. It is well organized and the text is clear. There are numerous references. There are a moderate number of illustrations. The book is quite up-to-date. It is very easy to read. This is an outstanding textbook of endocrinology and is heartily recommended to all medical students and practicing physicians.

GENERAL PATHOLOGY, Edited by Sir Howard Florey, Professor of Pathology, Sir William Dunn School of Pathology, University of Oxford, England, Third Edition, illustrated, pp. 1104, published by W. B. Saunders Company, Philadelphia and London, 1962.

This textbook of general pathology remains an outstanding contribution in the field of pathology. As the editor points out in the preface, this is not intended to be a complete review of the field of pathology. The text itself consists of chapters written by various authorities concerning their special field of interest. The book has excellent illustrations, some of which include electronmicroscopy. The text integrates to a large extent biochemistry, pathology and immunology. There is a fascinating chapter on the immunology of tissue transplantation by Gowans. Another interesting chapter is the mode of action of antibacterial substances in vitro.

The book is well written, well organized and certainly worthy of reading by practicing physicians and medical

students. The information contained is background information pertaining to all facets of medicine. AK

TEXTBOOK OF OPHTHALMOLOGY, Adler.

Concentrates on the ophthalmic problems of the non-specialist—stressing diagnosis, treatment and indications that call for a specialist.

PHYSICAL DIAGNOSIS, Major and Gelp.

Offers step-by-step procedures for examining every area of the body by inspection, palpation, percussion and auscultation.

TEXTBOOK OF OBSTETRICS, Reid.

Gives you not only a clear picture of normal pregnancy and labor, but sound insight as well into the medical complications that may arise.

ANSWER — ELECTROCARDIOGRAM OF THE MONTH

RATE: 70 RHYTHM: Sinus
PR: .16 sec. QRS: .07 sec. QT: .40 sec.

INTERPRETATION: Abnormal. Non-specific T abnormalities all leads.

COMMENT:

This tracing was made because of an episode of chest pain, chills and fever in a patient who was under observation for disseminated lupus. This diagnosis could not be proved at that time but evidence confirming the presence of definite pericarditis, in the form of a pericardial friction rub and enlargement of the cardiac silhouette, was found. She had recurrent episodes later but has been, for several years, with no evident disease, and it is believed that her pericardial reaction was of the acute benign type usually considered due to viral infection. The T wave abnormalities present in this tracing returned to normal in later recordings.



Sponsored by Arkansas Tuberculosis Association

ERADICATION OF TUBERCULOSIS IN CHILDREN

Pediatricians must be aware of the danger of tuberculosis in children and use chemotherapy and the tuberculin test as their principal tools in the campaign to wipe out this disease.

A group of authorities in various fields of medicine met at Arden House in Harriman, N.Y., in November, 1959, at the joint invitation of the United States Public Health Service and the National Tuberculosis Association. The conferees agreed that the elimination of tuberculosis as a public health problem was a practical goal but recognized that this objective was not achievable for the country as a whole within the immediate future.

Therefore, recommendation was made for the establishment of intermediate goals. Two such goals have been proposed—an active case rate by 1970 of not more than 10 per 100,000 population (the case rate in 1950 was 80), and control of infection in each community to the point where not more than 1 per cent of the children at age 14 react to tuberculin. For children, the objective is for tuberculosis to become as uncommon as diphtheria or smallpox.

CHEMOTHERAPY THE FIRST TOOL

The most important tool to attain this objective is chemotherapy. The public health reason for treating adults is to render them noninfectious. In children the suppression of contagion is not of public health interest. Even where there is marked roentgenographic evidence of primary tuberculosis, a very small population of bacilli is usually found in cultures from gastric

lavage of children. Furthermore, most children with primary tuberculosis are free from symptoms, including cough. Isolation may not, therefore, be necessary, and some health departments permit a child with primary pulmonary tuberculosis to attend school if he is free from symptoms.

However, when possible, a child with newly discovered primary pulmonary tuberculosis should be admitted to a hospital for one or two days to obtain cultures from gastric lavage or from bronchial secretions. As the rate of tuberculosis falls, this procedure will become more important to identify bacilli resistant to the usual drugs. Prolonged hospitalization of children may be traumatic.

The main purpose of administering isoniazid to children with primary tuberculosis is to *prevent* complications.

Isoniazid is the only antimicrobial agent which prevents the development of complications. It is inexpensive and easily administered and should be given for at least one year in doses of 10 to 15 milligrams per kilogram of body weight.

The present trend in most parts of the world is to use combined therapy, that is, paraaminosalicylic acid (PAS) with isoniazid. In uncomplicated primary tuberculosis, and for use in secondary prophylaxis to prevent complications, there seems to be no reason why isoniazid should not be given alone.

Recent converters, very young children with reactions to tuberculin, all children with roentgenographic evidence of manifest primary tuberculosis, and children with complications of pri-

EDITH M. LINCOLN, M.D., *Archives of Environmental Health*, October, 1961.

LOMOTIL[®]

(brand of diphenoxylate hydrochloride with atropine sulfate)

ANTIDIARRHEAL TABLETS and LIQUID

lowers motility / relieves cramping / controls diarrhea

Roentgenographic studies by Demeulenaere¹ established that a single dose of 10 mg. of Lomotil slowed gastrointestinal transit within two hours and that it maintained its decelerating activity for more than six hours.

In diarrhea this lowered propulsion permits a physiologic absorption of excess fluid, lessens frequency and fluidity of stools and gives safe, selective, symptomatic control of most diarrheas. Concurrently, it conserves electrolytes and controls cramping.

Investigators have found the antidiarrheal action of Lomotil not only "excellent"² but "efficacious"³ where other drugs have failed. . . ."

DOSAGE: For *adults* the recommended initial dosage is two tablets (2.5 mg. each) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is under control. Maintenance dosage may be as low as two tablets daily. For *children* daily dosages, in divided doses, range from 3 mg. (½ teaspoonful three times daily) for infants 3 to 6 months to 10 mg. (1 teaspoonful

five times daily) for children 8 to 12 years. Lomotil is supplied as unscored, uncoated white tablets of 2.5 mg. and as liquid containing 2.5 mg. in each 5 cc. A subtherapeutic amount of atropine sulfate (0.025 mg.) is added to each tablet and each 5 cc. of the liquid to discourage deliberate overdosage. The recommended dosage schedules should not be exceeded.

NOTE: Lomotil is an exempt narcotic preparation.

Descriptive literature and directions for use detailed in Physicians' Product Brochure No. 81 available from G. D. Searle & Co., P. O. Box 5110, Chicago 80, Illinois.

1. Demeulenaere, L.: Action du R 1132 sur le transit gastro-intestinal, Acta Gastroent. Belg. 21: 674-680 (Sept.-Oct.) 1958.

2. Kosich, A. M.: Treatment of Diarrhea in Irritable Colon, Including Preliminary Observations with a New Antidiarrheal Agent, Diphenoxylate Hydrochloride (Lomotil), Amer. J. Gastroent. 35: 46-49 (Jan.) 1961.

3. Weingarten, B.; Weiss, J., and Simon, M.: A Clinical Evaluation of a New Antidiarrheal Agent, Amer. J. Gastroent. 35: 628-633 (June) 1961.

G. D. SEARLE & CO.
Research in the Service of Medicine



mary tuberculosis, or with chronic pulmonary tuberculosis should be given specific therapy.

TUBERCULIN TEST THE SECOND TOOL

The second and most important tool for eradication of tuberculosis in children is the tuberculin test. The emphasis should be on the *number* of tuberculin tests and, in children with previously negative tests, on the frequency of their repetition.

The tuberculin test is extremely valuable in diagnosis but it is not infallible. A Mantoux test will produce a skin reaction when tuberculous infection is present, provided the testing material is fresh, the test is properly administered and read, and the individual tested is not moribund, convalescent from measles, or receiving steroid therapy. However, some skin reaction to tuberculin may occur in those who have never been infected with tubercle bacilli. Sometimes such reactions can be recognized as atypical. A Mantoux which is red but not indurated is not called positive. Measurement of the Mantoux is important. Less than 5 mm. in diameter is definitely negative and 10 mm. or more positive. Between 5 and 10 mm. there is indecision and the test should be repeated with the same or a slightly larger dose. A test with 5 TU of PPD (the intermediate strength) should select 99 per cent of positive reactors.

Another tool for the eradication of tuberculosis is roentgenography. In children this tool should *never* be used for surveys, but every child with a positive tuberculin test should have a roentgenogram. If the child has obvious tuberculosis, sufficient films should be taken to guide the physician in the care of the patient.

Other approaches to the prevention of infection in children, aside from treatment and segregation of infectious adults, are attempts to alter the resistance of uninfected children by vaccination or the use of isoniazid as primary prophylaxis.

There is no doubt that increased resistance to exogenous infection can be obtained by vaccination, the BCG strain of attenuated bovine bacilli being the agent commonly used. This is of value in countries with a high incidence of tuberculosis, especially when given to newborn children. From a public health point of view, the artificial sensitivity produced by BCG interferes with the use of the tuberculin test in case finding. In areas of low morbidity this is a strong argument against the use of BCG.

ROLE OF PEDIATRICIAN

The prevention of tuberculous infection by the administration of isoniazid has been proved in experimental animals. The data from the prophylaxis study of the Public Health Service, when published, should show whether or not this method of prevention can be applied to human beings.

There are many contributions which the pediatrician can make to a tuberculosis control program. First, the negativism about tuberculosis must be overcome. Obviously, with a decreasing rate of infection there will be less tuberculosis and fewer tuberculin conversions. But the pediatrician must continue to be aware of the possibility of tuberculosis. Where there are tuberculous adults there are infected children. All children must be tested repeatedly in infancy and at least once a year ad infinitum or until conversion occurs; prompt treatment with isoniazid should follow conversions.

Tuberculosis is preeminently a social disease. It increases where living conditions are poor and homes overcrowded. Any measures to relieve poverty and its attendant evils of inadequate nutrition and crowding will help in the basic control of the disease. The pediatrician must function not only as a physician but also as a public-minded citizen intent on securing for every child the right to be protected from a preventable communicable disease.

THE JOURNAL OF THE *Arkansas* MEDICAL SOCIETY

Vol. 58 No. 12

FORT SMITH, ARKANSAS

U.C. MEDICAL CENTER LIBRARY

MAY 31 1962

San Francisco, 22

for
increased
pain...

increased
analgesia

Lilly

DARVON® COMPOUND-65

Darvon Compound-65 provides twice as much Darvon® as does regular Darvon Compound without increase in salicylate content or the size of the Pulvule®. Usual dosage is 1 Pulvule three or four times daily.

| Darvon Compound | | Darvon Compound-65 |
|------------------|---------------------------|--------------------|
| 32 mg. | Darvon | 65 mg. |
| 162 mg. | Acetophenetidin | 162 mg. |
| 227 mg. | A.S.A.® | 227 mg. |
| 32.4 mg. | Caffeine | 32.4 mg. |

Darvon® Compound (dextro propoxyphene and acetylsalicylic acid compound, Lilly)
Darvon® (dextro propoxyphene hydrochloride, Lilly)
A.S.A.® (acetylsalicylic acid, Lilly)

This is a reminder advertisement. For adequate information for use, please consult manufacturer's literature. Eli Lilly and Company, Indianapolis 6, Indiana.

"crying solitary in lonely places"



DILANTIN®

(diphenylhydantoin, Parke-Davis)

permits a richer life for the epileptic

*"It has been more than twenty years since the introduction of diphenylhydantoin sodium (DILANTIN Sodium) as an anti-convulsant substance. This drug marks a milestone in the rational approach to the management of the epileptic."*¹ In grand mal and psychomotor seizures, DILANTIN is a drug of choice for a variety of reasons: • effective control of seizures¹⁻⁹ • oversedation is not a common problem² • possesses a wide margin of safety³ • low incidence of side effects³ • its use is often accompanied by improved memory, intellectual performance, and emotional stability.¹⁰ DILANTIN (diphenylhydantoin, Parke-Davis) is available in several forms, including DILANTIN Sodium Kapseals,® 0.03 Gm. and 0.1 Gm., bottles of 100 and 1,000. Other members of the PARKE-DAVIS FAMILY OF ANTICONVULSANTS for grand mal and psychomotor seizures: PHELAN TIN® Kapseals (Dilantin 100 mg., phenobarbital 30 mg., desoxyephedrine hydrochloride 2.5 mg.), bottles of 100. for the petit mal triad: MILONTIN® Kapseals (phen-suximide, Parke-Davis) 0.5 Gm., bottles of 100 and 1,000; Suspension, 250 mg. per 4 cc., 16-ounce bottles. CELONTIN® Kapseals (methsuximide, Parke-Davis) 0.3 Gm., bottles of 100. ZARONTIN® Capsules (ethosuxinide, Parke-Davis) 0.25 Gm., bottles of 100.

This advertisement is not intended to provide complete information for use. Please refer to the package enclosure, medical brochure, or write for detailed information on indications, dosage, and precautions.

REFERENCES: (1) Roseman, E.: *Neurology* **11**:912, 1961. (2) Bray, P. F.: *Pediatrics* **23**:151, 1959. (3) Chao, D. H.; Druckman, R., & Kellaway, P.: *Convulsive Disorders of Children*, Philadelphia, W. B. Saunders Company, 1958, p. 120. (4) Crawley, J. W.: *M. Clin. North America* **42**:317, 1958. (5) Livingston, S.: *The Diagnosis and Treatment of Convulsive Disorders in Children*, Springfield, Ill., Charles C Thomas, 1954, p. 190. (6) *Ibid.*: *Postgrad. Med.* **20**:584, 1956. (7) Merritt, H. H.: *Brit. M. J.* **1**:666, 1958. (8) Carter, C. H.: *Arch. Neurol. & Psychiat.* **79**:136, 1958. (9) Thomas, M. H., in Green, J. R., & Steelman, H. F.: *Epileptic Seizures*, Baltimore, The Williams & Wilkins Company, 1956, pp. 37-48. (10) Goodman, L. S., & Gilman, A.: *The Pharmacological Basis of Therapeutics*, ed. 2, New York, The Macmillan Company, 1955, p. 187.

PARKE-DAVIS

92462

PARKE, DAVIS & COMPANY Detroit 32 Michigan





THE
JOURNAL OF THE

Arkansas

MEDICAL SOCIETY

Owned by

THE ARKANSAS MEDICAL SOCIETY

And Published Under Direction of the Council

ALFRED KAHN, JR., M.D., Editor

1300 West Sixth Street Little Rock, Arkansas

MR. PAUL C. SCHAEFER, Business Manager

218 Kelley Bldg. Fort Smith, Arkansas

LITTLE ROCK BUSINESS OFFICE

114 E. Second St. Little Rock, Arkansas

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY

| | |
|---|---------------|
| WM. A. SNODGRASS, JR.—President..... | Little Rock |
| H. KING WADE, JR., President-Elect..... | Hot Springs |
| M. E. BLANTON, First Vice-President..... | Jonesboro |
| CHARLES W. REID, Second Vice-President..... | Pine Bluff |
| L. E. DREWREY, Third Vice-President..... | Camden |
| H. ELVIN SHUFFIELD, Secretary..... | Little Rock |
| W. R. BROOKSHER, Secretary Emeritus..... | Fort Smith |
| BEN N. SALTZMAN, Treasurer..... | Mountain Home |
| C. LEWIS HYATT, Speaker, House of Delegates, Monticello | |
| J. P. PRICE, JR., Vice Speaker, | |
| House of Delegates..... | Monticello |
| MR. PAUL C. SCHAEFER, Executive Secretary, | |
| P. O. Box 1345..... | Fort Smith |

COUNCILORS

| | | |
|------------------|------------------------|-------------|
| First District | JOE VERSER..... | Harrisburg |
| | ELDON FAIRLEY..... | Osceola |
| Second District | HUGH R. EDWARDS..... | Searcy |
| | PAUL GRAY..... | Batesville |
| Third District | K. E. BEATON..... | Wynne |
| | PAUL MILLAR..... | Stuttgart |
| Fourth District | H. W. THOMAS..... | Dermott |
| | T. E. TOWNSEND..... | Pine Bluff |
| Fifth District | J. L. DEDMAN..... | Camden |
| | GEORGE C. BURTON..... | El Dorado |
| Sixth District | JOHN P. WOOD..... | Mena |
| | KARLTON H. KEMP..... | Texarkana |
| Seventh District | MARTIN EISELE..... | Hot Springs |
| | J. W. KENNEDY..... | Arkadelphia |
| Eighth District | ROBERT D. JONES..... | Little Rock |
| | BILL DAVE STEWART..... | Little Rock |
| Ninth District | ROSS FOWLER..... | Harrison |
| | STANLEY APPLIGATE..... | Springdale |
| Tenth District | L. A. WHITTAKER..... | Fort Smith |
| | C. C. LONG..... | Ozark |

The Advertising policy of this JOURNAL is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

EXCLUSIVE PUBLICATION—Articles are accepted for publication on the condition that they are contributed solely to this JOURNAL.

COPYRIGHT 1962—By the JOURNAL of the Arkansas Medical Society.

NEWS—Our readers are requested to send in items of news, also marked copies of newspapers containing matter of interest to the membership.

SCIENTIFIC ARTICLES

| | |
|----------------------------|-----|
| A New Look at the Blood | |
| Dyscrasias..... | 511 |
| Malcolm M. Hargraves, M.D. | |
| Leukemia and the General | |
| Practitioner..... | 522 |
| Malcolm M. Hargraves, M.D. | |
| An Address on Operation | |
| Plowshare..... | 538 |
| Dr. Edward L. Teller | |

WHAT'S NEW

| | |
|--------------------------------|-----|
| Clinical Audiology . . . A New | |
| Science..... | 542 |
| H. A. Ted Bailey, Jr., M.D. | |
| and Frederick N. Martin, M.A. | |

TEACHING SEMINAR

| | |
|-------------------------------|-----|
| The Hydrothermal Shrinkage of | |
| Collagen..... | 544 |
| Joseph T. Wilson, Jr. | |
| and John A. Pierce | |

FEATURES

| | |
|-------------------------------------|-----|
| Electrocardiogram of the Month..... | 548 |
| What Is Your Diagnosis?..... | 549 |
| Public Health at a Glance..... | 550 |
| Resolutions..... | 551 |
| Editorial..... | 552 |
| Medicine in the News..... | 553 |
| Things to Come..... | 558 |
| Obituary..... | 559 |
| Personal and News Items..... | 560 |
| Proceedings of Societies..... | 562 |
| New Members..... | 563 |
| Women's Auxiliary..... | 564 |
| Book Reviews..... | 564 |
| Tuberculosis Abstracts..... | 565 |
| Index..... | 567 |

Notice on Form 3579-P to be sent to Arkansas Medical Society, 218 Kelley Building, Fort Smith, Arkansas. Published monthly under direction of the Council, Arkansas Medical Society, Vol. 58, No. 12. Subscriptions \$3.00 a year. Single copies 50 cents. Entered as a second class matter, May 1, 1955, at the post office at Little Rock, Arkansas, under the Act of Congress of March, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 1, 1918. Second-class postage paid at Little Rock, Arkansas.

A NEW LOOK AT THE BLOOD DYSCRASIAS

Malcolm M. Hargraves, M.D.

Section of Medicine
Mayo Clinic and Mayo Foundation
Rochester, Minnesota

*Read at the meeting of the
Arkansas Academy of General Practice,
Little Rock, Arkansas, October 11 and 12, 1961*

IN CHOOSING MY TITLE for this meeting, "A New Look at the Blood Dyscrasias," I planned a deliberate departure from the ordinary type of presentation of such a subject. I must warn you beforehand that my views on the leukemias, lymphomas and the so-called collagen diseases are largely unorthodox, and at present I regard them as one group which I call "mesenchymal dyscrasias." Briefly stated, I believe that the mesenchymal tissues react to certain stimuli in an orderly manner in normal people, producing fever, leukocytosis, antibodies and other physiologic responses as the occasion requires. However, in certain persons the response becomes abnormal, with such manifestations as obscure and persistent fever, malaise, abnormal immunologic and hematologic reactions but without any specific distinction which would produce a recognized diagnostic entity. This state I call an "undifferentiated mesenchymal reaction." In due time many of these undifferentiated mesenchymal reactions may differentiate into a definite classifiable entity, such as leukemia, lymphoma, systemic lupus erythematosus, periarteritis or even multiple recognizable entities. Without doubt, as time goes on more and more entities probably will become recognized, and those persons of a concise, systematic turn of mind will be

able to put them into a "pigeonhole" and again relax with the satisfaction that seems to come with orderliness. For myself, I still go on blissfully in my disorganized way as a "lumper," and even though something differentiates I still feel the foreboding rumblings of a seething mesenchymal system which may erupt with more fearsome manifestations at any time.

Antecedent Studies

With your permission then, I should like to enlarge upon these ideas and illustrate my observations with some thumbnail reports of cases. It is obvious that within the time allotted I could not present complete, documented histories, and so you are rather forced, as a captive audience, to accept my statements as being based upon as complete physical and laboratory findings as circumstances at the time permitted. Finally, at the completion of my morning and afternoon presentations, since they complement each other, you may form your own opinion as to the worth of my views and as to whether you wish to adopt them for your own medical practice.

I am sure that you are aware of the fact that textbooks still list leukemias and lymphomas as "a disease of unknown etiology," and further list the grim prognosis and statistical life expectancy accompanying these conditions for the in-

formation of both physician and patient. However, as one's clinical experience increases, he finds that these tables of survival, the prognostic signs and even the classification and diagnosis as outlined in the textbooks often lead to embarrassment. Hence it is little wonder that the older clinician becomes more and more cautious when he is questioned about predictions and expectancy by the patient or the family involved. *So many patients refuse to fit into the statistical prognostic pattern!* When one is engaged in a general medical practice in which there is a large proportion of patients who have the various blood dyscrasias, one cannot help noting this variation, and if one has any spark of investigative interest in his medical constitution it must certainly be aroused to pursue further investigation in these instances, even though such investigation is only systematic observation and curious inquiry. Needless to say, my curiosity has been aroused by many such patients in the last 25 years of hematologic and general practice, and today I should like to present some of my conclusions which are based on my observations and scientific curiosity. Since all of you are engaged in a busy general practice, you can appreciate the investigative limitations imposed upon one under such circumstances. Extensive clinical research involving laboratory studies of necessity has been limited. However, as a hematologist, I have had the opportunity to do a moderate amount of laboratory work, particularly in the morphologic field of cytologic studies of blood and bone marrow, but my major contribution perforce has been based upon talking to, and trying to manage the therapeutic care of, a constant stream of patients afflicted with the various blood dyscrasias.

Investigatively, I have been interested fundamentally in the relationship of environmental agents to the appearance and activity of these blood dyscrasias in the individual patient. Primarily, this work has entailed the careful development of histories and relating "exposures" to the manifestations of the disease in a time sequence. Such an approach has brought about the accumulation of a practical working knowledge of the various patients' occupations, their hobbies and associations, as well as their part-time activities which might involve agents the

inhalation of which, or physical contact with, might be of etiologic significance. Since I have been able, by repeated consultations, to follow the sociomedical status of many of these patients during the lifetime of their disease, I have been able to draw certain deductions by correlating their work-and-play activities with exacerbations and remissions of their disease. The sum total of such work literally has constituted a professional lifetime project.

In presenting this brief sketch of my impressions and working hypotheses, I do so with a reservation to which I have always held firm, namely, the right to change my opinion at any time when the weight of new evidence or the light of new observations contradicts the old. I have tried not to become ensnared in a rut of prejudice and fixed convictions regarding this problem and have tried hard to do the near-impossible—to keep an open mind.

In September of 1960 Hanlon and I presented some of these observations to the International Congress of Hematology in Tokyo, Japan, and I shall use some of those recorded observations and comments throughout this paper.

The Ubiquitous Aromatic Hydrocarbons

It has long been known that benzene (the fundamental aromatic hydrocarbon ring, C_6H_6) is an important agent in the production of blood dyscrasias, and for practical purposes it may be said that benzene in small quantities is found in practically all crude petroleum as well as in the commercial derivatives of petroleum. These petrochemical products include degreasing agents, industrial and household solvents, paint thinners, paint and varnish removers, fuel oil, gasoline, kerosene, diesel fuel and many aerosols. In addition to benzol (the commercial grade of benzene) and other aromatic hydrocarbons, I personally believe that the aliphatic, as well as the chlorinated, derivatives of both hydrocarbon series are important agents in the production of the mesenchymal dyscrasias. It is, of course, extremely difficult to incriminate any single agent in most of these studies. When one is working with a purified drug, for example, and can produce and reproduce purpura or neutropenia, it is relatively safe to say that the patient's reaction to this drug is responsible for the observed phenomenon. However, as I have hinted above, in

the industrial world few so-called chemically pure agents are used to manufacture commercial products; rather, the "commercial-grade" chemicals, containing small quantities of chemical contaminants, are so employed. These contaminants might well be the biologically important protagonists, while the major chemical itself is being indicted. Moreover, the various commercial products which reach the consumer usually are mixtures or blends of the various aliphatic, aromatic and chlorinated hydrocarbons, the formulation (usually a trade secret) producing a more efficient product in a highly competitive market. To complicate our problem further, the average patient uses numerous formulations and compounds while going about his daily activities as a printer, metal worker, carpenter, spray painter, farmer or any of dozens of modern-day occupations. Actually, the most vulnerable person, in my opinion, is the one with a hobby involving painting a few rooms in the home, refinishing some old furniture, building a rumpus room for the children, or even building or finishing his own home. In such incidents he uses the various degreasing agents to remove grease and grime from the woodwork and walls, paint and varnish removers to remove old and unwanted decorations and paint solvents to thin old paint, and he rolls on large areas of the new types of paint with their odorless, aromatic solvents which are inhaled in large quantities as the work proceeds.

It is worth while to note in passing that seldom does Mr. John Q. Public or his wife ever read or observe the warning labels on cans or bottles which urge "do not inhale" or "do not use in a confined space—use only with adequate ventilation." One might also note that seldom is it feasible to get the job done and still obey the warnings on the label! In the usual course of events there is considerable exposure of the painter and the rest of the family innocents while the entire production job is drying and the solvents are evaporating within the closed confines of the house.

Mesenchymal Idiosyncrasy or Hypersensitivity

The second important point which I should like to make and to *stress* is the evident mesenchymal idiosyncrasy or hypersensitivity of persons who suffer difficulties after such ex-

posures. Certainly, millions of Americans use the agents I have mentioned, but blood dyscrasias develop in only a relatively few of them. (However, as an aside, it is worth noting that the combined death rate from leukemias and lymphomas is essentially the same as that of traffic deaths in the United States, and that it is increasing progressively. Publicly, we seem considerably exercised about our traffic fatalities!)

Now, as a corollary to this seeming individual susceptibility, I have observed that a large number of these patients also exhibit manifestations of the commonly recognized allergic states, such as vasomotor rhinitis, hay fever, recurring urticaria, angioedema or reactions to drugs. In the process of ferreting out the histories, I have found many patients from families in which other members are, or have been, victims of these various mesenchymal dyscrasias, suggesting that these mesenchymal tissues which react pathologically to their environment are inherited protoplasmic characteristics. I feel, therefore, that it is no coincidence when our record shows that two sisters have died of lymphosarcoma; that at present I have as patients a mother and son each of whom has Hodgkin's disease; that I have the records of five direct descendants of one generation of grandparents, all of whom have lymphomas; that a father sought advice from me when his third child was stricken with acute leukemia; or that a brother and sister with one niece all died of lymphomas. This part of a patient's record obviously is important in the therapeutic approach to management of his disease as well as in advising and guiding other members of his family who very likely also are your patients.

Importance of Intermittent Exposure

The third point that must be stressed is that *intermittent exposure and not constant exposure* seems to be almost essential to the production of these dyscrasias. In other words, the professional painter, despite his constant exposure, seldom is a victim of these diseases; rather, as I have indicated, it is usually the hobbyist or householder who paints and redecorates a few rooms one year and in the next year or years does a couple of more rooms or the basement floor and then appears with lymphoma, leukemia, aplasia or some other type of blood dyscrasia. The examples are too numerous to explore at this moment, but

must be appreciated if I, as a physician, am to offer you anything constructive to apply to your own practice. In the future, unhappily, you must suspect the world around you.

In keeping with the foregoing comment, I should like to stress the fact that, although the various hydrocarbons probably are the most important group of agents responsible for these blood dyscrasias, there are others which I think are of importance in the individual patient. These latter include bacteria or their various proteinaceous toxic products (many probably are today's "nonpathogenic strains"), actinic rays (especially sunshine), and, of course, roentgen rays or other types of irradiation. You will note that I have pointed out and shall point out only the time relationship which seems to exist between exposure to these agents and the appearance of disease; I have neither offered nor suggested any mechanism or pathologic-physiologic dysfunction responsible for the resulting mesenchymal dyscrasia.

To summarize then, I believe that the leukemias, lymphomas and certain other mesenchymal dyscrasias result from exposure of the afflicted patient to noxious environmental agents. Second, I believe that this exposure usually, but not always, is intermittent. Third, I believe that a reaction to such exposure occurs only in the genetically susceptible person and that it very likely is an inherited characteristic, other members of the victim's family also being susceptible.

Now that I have stated my thesis for this morning's discussion, I should like to present the thumbnail reports of cases which I promised earlier. I have hopes that these sketches will be sufficiently provocative to bring you back for the afternoon session, at which time we shall apply these ideas more specifically to the therapeutic management of your own patients.

Some Illustrative Cases

CASE 1.—I first saw this man in June, 1940, when, at the age of 62 years, he presented himself at the Mayo Clinic with a 9-month history of severe toxic pruritus, generalized lymphadenopathy, chronic cough, recurring fever with drenching night sweats and marked loss of weight. In retrospect, it is of interest to note that this patient was a railway baggageman sub-

ject to repeated infections of the upper part of the respiratory tract which could well be attributed to his constant exposure to weather and the changes in temperature inherent in this type of work, as well as to exposure to multiple human contacts. It was his opinion that his illness had started the previous fall (1939) after a "fall cold that never cleared up." Examination revealed generalized lymphadenopathy with hepatosplenomegaly and excoriations of the skin, indicating severe toxic pruritus. Laboratory studies disclosed mild anemia, leukocytosis with toxic changes in the blood elements and an elevated sedimentation rate (93 mm. in 1 hour, Westergren). A roentgenogram of the thorax showed marked fibrosis in the fields of both lungs, with an increase in hilar shadows "typical of lymphoma." Biopsy of tissue from an axillary lymph node revealed Hodgkin's disease. Roentgen therapy was instituted.

Three months later (September, 1940) the patient was seen again. Improvement was obvious; the troublesome pruritus and night sweats had disappeared, a roentgenogram of the thorax demonstrated marked improvement and results of studies of the blood, including the sedimentation rate (21 mm. in 1 hour) were essentially normal. Additional roentgen therapy was given for the residual adenopathy and splenomegaly and the patient returned to his home for another 2 months.

At the end of this time the patient felt very well indeed. He had gained 13 pounds and had no major difficulties. Again, results of laboratory studies were essentially normal, but the tip of the spleen still could be palpated. For this reason additional roentgen therapy was administered to the abdomen.

Six months elapsed before I again saw this patient (April, 1941). On that occasion he said that he had again been stricken by the "flu" in January, and that he had been in bed with fever (temperature of 104° F.), pleurisy, malaise and temporary recurrence of the lymphadenopathy. Examination at this admission, however, did not reveal palpable splenomegaly or peripheral adenopathy, but in the roentgenogram of the thorax "exaggerated hilar shadows" were seen. The value for hemoglobin was only 10.5 gm. per 100 cc. of blood and the sedimentation rate was

31 mm. in 1 hour. These data suggested reactivation of the Hodgkin's disease. Roentgen therapy was administered to the mediastinum.

At this time the patient asked if I would discuss his difficulties rather thoroughly with him because he had some important decisions to make. I agreed, and explained the indeterminate nature of Hodgkin's disease, telling him of the statistical life expectancy of "about 3½ years after the onset of symptoms." Of necessity, I had to counsel him that additional roentgen-ray treatment undoubtedly would have to be administered periodically, as indicated by his condition, as such treatment had been given during the previous year. This patient accepted the explanation without visible emotion. He said that he was eligible for retirement from the railroad and that he was going to accept such retirement and go south and do some fishing. In brief, I can say that he did just that: he went south to escape the rigors and infections of our winter weather. During World War II, I wrote letters to the patient's local ration board so that he could obtain the necessary gasoline ration stamps for the southern trips.

Now, the salient point here is that throughout the years I have had the opportunity to examine this patient repeatedly and I have found no evidence of a recurrence of the Hodgkin's disease. At the time of this report the patient was in his eighty-fourth year, 22 years after the onset of his difficulties, and he was still well and free of any of the stigmata of Hodgkin's disease. It seems to me that the Hodgkin's disease in this case was very probably secondary to the effects of the organisms complicating the infection of the upper part of the respiratory tract, and that the fact that the patient was free of these infections caused the Hodgkin's disease to remain quiescent throughout the years. However, other possible exposures incident to the patient's railroad work cannot be discounted.

CASE 2.—I first saw a 35-year-old farm woman when she came to the Mayo Clinic in 1939 complaining of weakness, dyspnea and generalized lymphadenopathy. Actually, she had had prominent axillary lymph nodes for 2 years (1937) before she sought medical advice. Biopsy had revealed lymphocytic lympho-sarcoma. Roentgen-ray treatment had been administered then and

on subsequent occasions when recurrence of the adenopathy required it.

In 1947, 10 years after the appearance of the persistent lymphadenopathy, the patient left the farm and became a telephone operator in a small neighboring Minnesota city. On occasion she returned to the clinic for periodic examination and occasional roentgen-ray therapy to an isolated enlarged lymph node.

In view of this patient's long history, I tried to determine some of the factors which might have been important in the periods of remission and reactivation of the lymphosarcoma. It developed that she had always enjoyed redecorating the farmhouse and periodically she would do wallpapering and painting. After leaving the farm she purchased a house in town and remodeled it into several apartments, doing the redecorating herself. She volunteered the information that dermatitis usually developed after exposure to the synthetic paint thinners which she used, and also that the lymphadenopathy seemed to recur when she was exposed to the paints. After this conversation she partially, but never completely, avoided such exposures, and for the next 10 years required almost no additional roentgen-ray treatment. However, she continued to work as a telephone operator in the small building housing the switchboard. This room was heated by oil-burning space heaters which probably were faulty in combustion, with the result that considerable petroleum-distillate fumes filled the air. This was especially true when it would be her turn to work the night shift during the long, cold nights.

It was at this time (winter of 1957-1958) that she returned with lymphomatous involvement of the right orbit. A few months later additional enlarged nodes were palpable in the parotid and cervical areas. Since this recurrence took place 20 years after the original lymphadenopathy, she agreed to another biopsy of tissue from a lymph node. The diagnosis of lymphocytic lymphosarcoma was thereupon reaffirmed. I had previously advised her to leave the job in the telephone office when I became aware of her exposure to these petroleum fumes, and I had suggested that she probably would have a recurrence of the disease if she retained the job. However, because of existing social and financial reasons, she chose

to keep the job for the winter, which would be her final tenure. During the period of these last few years a progressive nephrotic type of syndrome also developed, with severe hypertension, azotemia and anemia. The patient lived for more than 3 years after she left her job in the telephone office, and there was no evident activity of lymphosarcoma. She finally died of renal insufficiency 24 years after she had first noted the lymphadenopathy.

CASE 3.—A boy was first seen at the Mayo Clinic at the age of 15 years in 1950. The significant medical aspects of his history had begun very early in life. He came from a family in which a grandmother had died of nephritis, a grandfather had died of "heart disease" (rheumatic endocarditis?) and a sister had had rheumatic fever. The patient himself was subject to severe asthma as well as eczematoid and urticarial reactions to many agents. When he was about 2 or 3 years old his family physician had despaired of the patient's surviving the winter because of "status asthmaticus" which had developed after an infection of the upper part of the respiratory tract. The patient's parents had been advised that if the child was not taken out of Kansas and into another climate he probably would die. The mother took the boy and the other children to the dry, warm climate of Albuquerque, New Mexico, and there the recovery of the boy was most remarkable; the infection of the upper part of the respiratory tract cleared, as did the asthmatic type of bronchitis and many of the other manifestations of allergies. The family stayed in Albuquerque the rest of that winter.

After this sojourn in the southwest the patient's health seemed excellent, although he had returned to Kansas. Soon, however, he began to experience an occasional asthmatic attack. Then, at about the age of 7 years, he had "glandular fever" in which the cervical lymph nodes were swollen, fever was high and malaise was present. Rest in bed was required for 6 weeks before the fever and adenopathy disappeared. It is interesting to note that after this illness cervical lymphadenopathy began to develop each time the patient had a "cold," but the nodes would recede spontaneously as recovery progressed, as did the associated asthmatic bronchitis. At the age of 13

years, however, after such an infection, enlargement of the nodes persisted and the nodes remained palpable for about 2 years, detectable as discrete, firm, supraclavicular and left cervical adenopathy.

When the patient returned to school in the fall, after this 2-year period of "static" adenopathy, the glands enlarged progressively and further medical advice was sought. Studies of the blood revealed an "abnormal blood picture," and biopsy of tissue from a cervical lymph node established the diagnosis of Hodgkin's disease. At this point it should be emphasized that this type of history of recurring and subsiding adenopathy, often with a diagnosis of "hyperplastic" or "inflammatory lymph node" as a result of biopsy, should be considered the rule and not the exception early in the course of a lymphoma.

Next (1950), the patient was referred to the Mayo Clinic for further consideration. The patient was 6 feet, 4 inches tall and 15 years old. He weighed 150 pounds and manifested generalized lymphadenopathy but not palpable splenomegaly. Except for a sedimentation rate of 41 mm. in 1 hour (Westergren), the laboratory findings were not remarkable. Review of the lymph-node tissue by our pathologists was reported as showing Hodgkin's sarcoma.

Roentgen therapy was prescribed for the patient. An intensive course of treatment was administered over the left cervical and axillary areas, after which the patient returned to his home with the prescription of a restricted program.

Approximately 2 years later the patient returned for re-examination. Results of this examination were entirely satisfactory: no abnormalities were noted during either laboratory or physical procedures. At that time he was 6 feet, 6 inches tall and weighed 168 pounds. He was 17 years old.

Another 2 years passed, and then the patient returned for re-evaluation. He said he had been well during the interval, and that he was working as an apprentice bricklayer. Physically we found no abnormalities, but the value for hemoglobin had decreased from 15 to 12.7 gm. per 100 cc. of blood, and the sedimentation rate had increased from a previous value of 4 mm. in 1 hour to 62 mm. in 1 hour. Although these findings

made me somewhat disquieted, I uncovered nothing remarkable in the history, and I advised that we investigate no further at the moment. I asked the patient to return in a year's time, or sooner if indicated.

Six months later, or in 1955, the patient was attacked by what was considered to be an acute infection of the upper part of the respiratory tract associated with intermittent fever, night sweating, lymphadenopathy and anemia. Penicillin therapy produced some degree of beneficial response, but most of the systemic difficulties and findings persisted.

The patient returned to the Mayo Clinic. It was found that he had lost weight, and that there was a chain of definitely enlarged cervical lymph nodes on the left. The value for hemoglobin at this time was only 10.9 gm. per 100 cc. of blood, but results of blood counts were normal. The sedimentation rate was 119 mm. in 1 hour (Westergren). Roentgenograms of the thorax again were reported as disclosing nothing of significance, but those of the nasal sinuses showed thickened membranes in both antra. To satisfy both myself and the family, another cervical lymph node was removed and again a diagnosis of Hodgkin's disease was reported by the pathologists. All cultures of material from the excised node remained sterile. Additional roentgen therapy was given to the left cervical region and lower part of the abdomen.

Because I felt that bacterial aspects might be very important in this patient's Hodgkin's disease, particularly in view of his beneficial experience in New Mexico as a child, I advised him to give up his work in Kansas and move to Albuquerque permanently. After a period of argument, persuasion and finally frank discussion of his prognosis, he agreed to do this.

The patient did very well after this geographic move; his weight increased to around 225 pounds and he enjoyed the best of health. He continued with his masonry apprenticeship, married and became the father of two normal children.

One might have been fairly confident at this point (about 8 years after the first persistent lymphadenopathy) that this patient's difficulties might be well behind him. However, it must be remembered that he was a stonemason and was therefore engaged in construction work which

has its hazards for such patients. In the construction industry one of these hazards is exposure to fuel oil, particularly in cold weather, when carpenters, masons and concrete workers have to carry on under the protection of tarpaulins with secondary heat supplied to keep the concrete and mortar from freezing. Large tarpaulins enclose the work area so that it can be heated with oil burners.

In the fall of 1958 this patient was working on a construction job under the foregoing conditions. Several salamander stoves were burning, and vaporizing fuel oil into the air, while keeping the space heated and thus prevent freezing of the concrete and mortar. Within a short time the Hodgkin's disease of this patient was reactivated; by Christmas of 1958 he was in the local hospital receiving roentgen-ray treatment and nitrogen mustard for this reactivation.

After treatment he again returned to his former work, and once more the Hodgkin's disease became active. Finally he returned to Kansas because of his inability to continue work, but I neither saw him nor heard from him during this period. In his new home in Kansas he was additionally exposed to various hydrocarbons, including those involved in periodic painting and use of a lindane vaporizer for control of an epidemic of spiders in the house. (Lindane is the gamma isomer of benzene hexachloride, that is, hexachlorocyclohexane.) Moreover, in his home fly sprays and aerosol air fresheners were used extensively. Nearly all of these contain petroleum distillates of low boiling points. While he was exposed to these agents, "pneumonia" developed for which he received considerable penicillin. After eventual recovery in the winter of 1959 and 1960 the patient again went to work as a brick mason under the same conditions, namely, working under tarpaulins with oil-burning space heaters. Once more the Hodgkin's disease was reactivated.

It was at this time that the patient returned to the Mayo Clinic. It was the first time I had seen him in 5 years. At this time (November, 1960) he was again anemic. The value for hemoglobin was only 10 gm. per 100 cc. of blood; neutropenia was present, with marked toxic changes in the neutrophils. Monocytosis was noted, and he had a temperature of 102° F. on the morning

I examined him. His spleen was enlarged two to three fingerbreadths below the costal margin, and generalized lymphadenopathy was found. Once more he received intensive roentgen-ray therapy, and I rediscussed with the patient and his wife how important I felt were his exposures and their relation to the reactivation of his disease. He seemed to understand, but after the roentgen-ray therapy he felt so much improved that he again returned to his accustomed type of work, in spite of all the advice I had given him. His excuse was that a new type of oil-burning heater was in use which provided "good combustion" and employed a blower; by turning the blower toward the open end of the enclosure, he said, and placing himself at the distant end of the work area, it was assumed that he would receive a minimum of petroleum fumes. However, this assumption soon proved false, and very quickly his disease was reactivated.

In January, 1961, only 6 weeks after his previous admission, the patient returned to the Mayo Clinic acutely ill with fever. His sedimentation rate was high; monocytosis was present and all the signs and symptoms of acute difficulty were at hand. His course during this admission proved to be very stormy. He was hospitalized and treated as best we could with steroids and additional chelating agents, but with little beneficial effect. He returned to his home with a prescription of such therapy as we felt he could tolerate, but he rapidly declined and died in April, 1961, or 18 years after the first appearance of his "glandular fever" and 13 years after adenopathy definitely indicated the presence of an active lymphoma.

I have presented the foregoing three cases in some detail so that you may see my approach to these problems, for whatever help it might provide. However, it is obvious that each patient presents a new challenge in the taking of a history, and each new history adds to the physician's store of accumulated knowledge about the ever-changing environment within which he and his patients exist and hope to survive.

The following extremely abbreviated reports are presented primarily to draw attention to the multitude of potentially important environmental agents and situations which exist today.

CASE 4.—A 55-year-old sales executive was ad-

mitted to the clinic in February, 1956. Careful questioning revealed that he actually was a paint chemist, and that for 17 years after completing his college career he had worked in a laboratory mixing experimental and special batches of paint. After this experience, with its attendant exposures, he had become sales manager for another paint company. There his work had been done in the front office, where there was little exposure to paint solvents. The illness for which he sought attention had started as his home was being re-decorated. The work had been done intermittently by some of the employees of his company, who painted outside in good weather and inside in rainy weather with the house closed. After this exposure weakness, malaise, fever and respiratory difficulties developed which brought the patient to the clinic. A diagnosis of acute leukemia was established and 6-mercaptopurine induced a satisfactory remission. The patient went to Florida, while continuing treatment, to escape the rigors of winter. His condition was satisfactory until the city in which he lived began to fog the streets and the golf course with a petroleum distillate-insecticide aerosol to control mosquitoes and flies. In spite of the fact that the patient quickly left Florida and returned to the clinic, he already had a full-blown exacerbation of his disease of which he died after several weeks of supportive treatment. Since such is the common course of acute leukemia characterized by induced remissions, perhaps the experience in Florida meant nothing, but who can say?

CASE 5.—A 54-year-old housewife gave a history of rheumatic fever acquired at the age of 9 years. She abhorred spiders and to kill them had used an insecticide aerosol or "bug bomb" containing, among other things, DDT and petroleum distillates. She had very thoroughly sprayed the entire basement, under the stairs, in the fruit cupboards and in all the protected areas in which spiders might hide. While doing this she became nauseated and rather ill, and several days passed before she recovered from this exposure. A month later she repeated the procedure on two different occasions, and became ill with each exposure. After the third episode fever, pains in the joints and malaise began to develop. These terminated in acute phlebitis of the left leg which brought her into the hospital

on my service. She was found to have acute myeloblastic leukemia. She died within the ensuing month.

CASE 6.—A 62-year-old lawyer was admitted to the hospital with acute aplastic anemia. In the preceding few years he had been exposed to considerable amounts of "fly spray," but just preceding the illness for which he was admitted to the hospital the patient had covered his head and inhaled high concentrations of a "bug bomb" insecticidal mixture consisting of 4 per cent chlordane in 96 per cent petroleum distillate in an attempt to "cure" an infection of the upper part of the respiratory tract. This form of therapy had been suggested by one of his neighbors. With supportive care and avoidance of further exposure the patient seems to have made an uncomplicated recovery, although we have not seen him since.

CASE 7.—A 70-year-old Latin-American dentist was admitted directly to a hospital because of multiple abdominal masses which were causing partial obstruction of the bowel. Biopsy of tissue from a supraclavicular node revealed lymphoblastic lymphosarcoma, for which he received treatment. On careful questioning it was determined that during most of his life he had slept under the protective cover of a mosquito-netting tent. Three years before his admission to the hospital the mosquito netting had been abandoned, and several times a week the bedroom was sprayed with a mixture of chlorinated hydrocarbon and petroleum distillate and was closed for a time to kill the mosquitoes in the room before the patient retired. After 3 years of this type of exposure the patient was found to have extensive lymphoma.

CASE 8.—A physician came to the Mayo Clinic because of severe jaundice and anemia which proved to be acute hemolytic anemia and associated damage to the liver. His history of exposure is very interesting. The convalescent rest home which he operates had become infested with roaches and the physician had attempted to exterminate them by personally using insecticides in the form of aerosols. In going back over the history with him it was determined that he had used approximately a "bug bomb" a week, working in all parts of the building, about the pipes, mopboards, bottoms of closets and other secluded

areas of his 22-room sanatorium. Boxes of supplies coming to the sanatorium also were sprayed to prevent any new infestation. This activity continued for approximately 8 or 9 weeks, while the patient progressively became more ill. He finally collapsed and had to be hospitalized because of a combination of hepatitis and acute hemolytic anemia. He recovered completely and approximately 6 years later seemed to show no ill effects from the near-fatal experience.

CASE 9.—A man came to the Mayo Clinic in 1954 because of severe toxic pruritus which he had had for about 4 years. Numerous medications had been used, but none had seemed to be of any help. Biopsy of tissue from lymph nodes finally revealed Hodgkin's granuloma, and the disease of the skin was diagnosed as associated toxic pruritus. It was determined that at the onset of his illness the patient had been engaged in a research project at a large United States Government experimental farm, working on the nutrition of hogs. Severe dermatitis developed among the hogs during the experiment, and the patient and his associates had repeatedly and intensively sprayed these animals with an aqueous solution of lindane. As often happens among farmers and cattlemen who use this type of spraying in a mass program, more of the insecticide accumulated on their own skin and in their lungs than on the hides of the animals going through the chute or milling around in the corral. This patient was given roentgen-ray therapy. He returned to the East, where he died a year or so later.

CASE 10.—A welder and ornamental-iron worker 42 years old was seen at the Mayo Clinic in 1952. He complained of "swollen glands" and "arthritis" which had persisted for 2 years. Tonsillectomy had been done without benefit; finally, biopsy of tissue from a cervical lymph node established the diagnosis of "myeloma of the cervical lymph nodes." Roentgen-ray therapy was administered. When the patient was seen at the Mayo Clinic a few months later no obvious lesion was found to account for the persistent cervical adenopathy, and again biopsy of tissues from lymph nodes was performed. The pathologist's report verified the previous diagnosis of myeloma. The development of this patient's history of exposure is of interest because

at the time of his original admission to the Mayo Clinic he was listed as a partner in an ornamental-iron works, but when he returned for a re-examination it was noted that he was listed as the owner of an ornamental-iron works. Results of re-examination at that time were entirely satisfactory, and in the ensuing 9 years he continued to remain well. Those who have spent any time in the workrooms of an ornamental-iron works know that the atmosphere is periodically saturated with atomized paint when the finished product is spray-painted for delivery. When this patient was a partner in the business he did active work in forging, welding and spray-painting until the time of his first admission to the clinic. On his return home he had taken over the entire company and had moved to the front office, where sales and managerial duties removed him from further exposure to spray paints. There was no further activity of his myeloma during the subsequent 9 years.

CASE 11.—A farmer was admitted to my hospital service afflicted with acute and eventually fatal aplastic anemia. In the taking of his history it was determined that he had used an insecticide powder consisting of "75 per cent naphthalene" and its analogues to scrub the backs of his cattle as well as to put in the nests and litters of his large chicken house. He had carried out this program of insect control throughout the winter months, and it is of interest to note that he had observed, in addition to his own difficulty, that his cattle had "gaunted up," as he described it, and that the high production of eggs of his flock of chickens had declined coincident with this use of insecticides.

CASE 12.—A banker from a small town was found to have chronic myelogenous leukemia. His major interest, outside the bank, was a herd of approximately 150 head of registered beef cattle which he continually and conscientiously cared for after banking hours and on week ends. He kept them free from flies and parasites by the use of a petroleum distillate containing 40 per cent chlordane, and obviously he experienced considerable exposure himself. After the significance of these exposures was discussed with him he "avoided them as much as possible," and continued to do well for about 7 years. He received

occasional specific treatment and continued to observe the precautions outlined for him.

CASE 13.—A 45-year-old farmer was admitted to the Mayo Clinic with acute monocytic leukemia. In addition to the usual types of exposure common to a farm, exposure to a varnish and paint remover had been incurred while he spent much of the preceding winter refinishing furniture. The agent he used contained "less than 49 per cent benzol." He also came into contact with varnish and paint solvents, brush cleaners and paint thinners, all of which were used within the close confines of a farmhouse. It is little wonder that by the time spring arrived he had acute leukemia. This association of benzol-containing paint and varnish removers and acute leukemia is all too common.

CASE 14.—This patient's history is an interesting and almost overlooked story of intermittent exposures. The patient was an architect who designed houses and at various times took an active part in the construction of rather large housing developments. Periodically he would leave his office and go on an inspection tour of these housing developments. According to his own testimony he would "often stop and varnish a door for exercise" before returning to his office. His acute leukemia was a rapidly fatal process.

CASE 15.—A 76-year-old business executive had always been vigorous and active and had enjoyed relatively good health. A grade 2 squamous-cell epithelioma of the vocal cords had been treated by a suspension and diathermy procedure 17 years previously. In the fall of 1957 he planned a 3-week pack trip into the mountains with his grandson. At the family's insistence he underwent a complete physical examination and was declared fit for the trip by his consulting physician. This was indeed fortunate, in view of subsequent developments, since it provided a standard for comparison after his ensuing history of exposures and illness began. The 3-week pack trip was taken in the fall, and since the days were warm the flies and other insects become a nuisance and invaded the sleeping tents. Each evening, therefore, the tents were sprayed with an insecticide and were closed up to kill the day's accumulation of insect pests. At retiring time the flaps were opened and the patient would retire to his sleeping bag for the night. There were no

other unusual incidents on the trip. After the patient returned home, however, multiple symptoms began to develop and he was re-examined about 6 weeks after the pack trip. He was found to have severe leukopenia.

The patient came to the Mayo Clinic in January of 1958, a month later, and our hematologic findings were as follows: hemoglobin, 10.8 gm. per 100 cc. of blood; leukocytes, 1200, and platelets, 59,000 per cubic millimeter of blood; and reticulocytes, 9.3 per cent. Examination of a blood smear showed a rare blast cell and practically complete agranulocytosis. Hepatic dysfunction was present; the bromsulphalein test of hepatic function showed that 14 per cent of the dye was retained. A specimen of bone marrow showed a "disturbed" hyperplastic state, the cellular elements consisting largely of leukoblasts and early erythroid cells. During the next couple of years he was seen by numerous hematologists and at medical centers and in due time full-blown acute and fatal leukemia became evident.

CASE 16.—A 57-year-old carpenter was admitted to the hospital in July, 1958, with acute myeloblastic leukemia. The value for hemoglobin was 4.4 gm. per 100 cc. of blood; erythrocytes numbered 1,410,000; leukocytes, 3,600; and platelets, 19,000 per cubic millimeter of blood. A blood smear was found to consist primarily of myeloblasts, in spite of the leukopenic picture. After confirmation of the diagnosis the patient returned home for treatment and supportive care, but died a month later of the disease. In his work as a carpenter he did much interior finishing which requires the affixing of much synthetic material to the supporting wall, floors, and counter tops by synthetic adhesive agents. Commonly, the excess adhesive is washed off the synthetic tiles and other coverings with gasoline after the adhesive sets. This patient had completed two big jobs with these synthetic agents the year before, involving much exposure to gasoline. In February of 1958 he again had been exposed extensively and this incident was followed by the "flu," from which he never recovered. From that time onward the signs and symptoms

of his acute leukemic state developed progressively and continued until his death in August of that year.

Comment

These brief reports of cases illustrate most of the instances of lymphoma and leukemia which I see. Actually, I now believe that in such cases I fail to obtain a significant history of exposure only from an occasional patient. Of course it is entirely possible that the observations I have made and the manner in which they correlate with specific disease processes are coincidental, and I am sure that the statisticians would have a field day with my data. However, this much seems incontestable: it is rare to find a person suffering from these dyscrasias who is a banker and not also a cattle fancier; a lawyer who is not also a farmer; a business executive who is not also a petroleum engineer or a paint manufacturer or a metal fabricator; a schoolteacher who is not a hobbyist with a record of considerable exposure to paint or wood preservative or some similar agent. Or, to put it another way, physicians, engineers, executives, teachers and housewives who are not exposed to these agents simply do not seem to find their way to my office afflicted with mesenchymal dyscrasia.

To me the most significant point in this general problem is that routine histories seem to be inadequate. The occupations of patients as listed on most records seldom give any indication of the true activities of these patients or of their environments. As family physicians we all have the opportunity really to study and observe, if we will, the natural history of these dyscrasias because we know the patient intimately. After we have made our contribution and provided pertinent data on the basis of our observations, it becomes the task of the investigator, with his special skills and technical knowledge as well as his necessary laboratory facilities, to pursue the problem for ultimate solution. At that point you and I must halt and return to our clinical practices, but I am sure you will agree that such an approach can be of significant benefit to our clinical practice if it contributes to the practical care and safety of our patients.

LEUKEMIA AND THE GENERAL PRACTITIONER

Malcolm M. Hargraves, M.D.

Section of Medicine
Moyo Clinic and Maya Foundation
Rochester, Minnesota

I BELIEVE THAT MANY of the blood dyscrasias are produced in the genetically susceptible person as a consequence of repeated exposure to certain environmental agents. Elsewhere I have hinted at the possible therapeutic control of these diseases by changing the physical locus of the patient and his environment. Now I should like to enlarge on this theme and to point out the unique opportunity the general practitioner has to help such patients manage their own illness and, in certain instances, to help them to live relatively normal lives. This proposal may sound somewhat prepossessing, particularly since the practice of hematology has changed so greatly in the last quarter of a century. In fact, the practice of hematology has largely moved from the bedside as a clinical art and has proceeded to the laboratory as a complex specialty with many subspecialties. Hematologic research and its resultant literature could well overwhelm the general practitioner of today and discourage him to a point of complete frustration when he sees a patient with a blood dyscrasia. I might add, however, that many of us specializing in the field suffer the same sense of frustration much of the time. Anyone who has ever done research realizes that such investigation is a slow, painstaking process with failure being recorded far more often than success; consequently, we should be more than optimistic if we were to expect sudden and miraculous cures to appear which would rescue both the patient and his physician from the joint dilemma. Most news releases in the popular press about new drugs and hopeful glimmers of possible "cures" seldom do more than to raise false hopes in the patient and further depress the family physician.

Although solution of many of our problems in the field of diseases of the blood and collagen

diseases eventually will be found in the laboratory, it disturbs me that the individual patient and his immediate problems have almost been lost in this technologic revolution. It seems to me that as physicians we have been diverted from observing our individual patient, struggling along as a living organism in an unfriendly environment, and that instead we have been seeking to analyze his component parts as they react in the laboratory and then manage his therapy accordingly. We can too easily forget that these component parts still constitute a needy and dependent patient. While most of us engaged in the active practice of medicine may have individual differences in the laboratory facilities or the physical plants at our disposal, all of us nevertheless have one facility in common, that is, our innate ability to make pertinent observations in our individual patient.

Let me enlarge upon the foregoing statement, since it is actually my major thesis. As family physicians we have the opportunity to know our individual patient intimately, the opportunity to obtain a pertinent history of the circumstances of his illness or complaint, and, finally, the opportunity, once such a relevant history has been obtained and combined with our intimate knowledge of the patient's circumstances of life and occupation, to give him sociomedical advice which no one else possibly could give.

Since I believe that a "dry clinic," or the use of actual histories to illustrate specific points, is still one of the best teaching methods, I shall present some cases which I hope will be illuminating.

Some Illustrative Cases

CASE 1.—A woman 41 years old came to the clinic in July, 1946, because she had noticed abdominal swelling in April which had increased

progressively. Earlier some degree of menorrhagia had been present, and on one occasion nausea and vomiting had occurred. She had lost 10 pounds. Her local physician had demonstrated a large abdominal mass.

This mass was described by examiners at the Mayo Clinic as a "large irregular abdominal tumor, very firm and immovable in the epigastrium but softer and more movable in the lower abdomen." Moderate hypertension (170 systolic and 100 diastolic, in millimeters of mercury) was recorded, but no other physical abnormalities were encountered.

The value for hemoglobin was 7.7 gm. per 100 cc. of blood; erythrocytes numbered 3,700,000 and leukocytes 8,900, per cubic millimeter of blood, with a relatively normal differential count. The sedimentation rate (Westergren) was 18 mm. in 1 hour. Roentgenograms of the stomach and colon disclosed nothing abnormal, but a roentgenogram of the thorax revealed a left hilar mass of indeterminate nature which did not pulsate during fluoroscopy.

It was decided to explore surgically the mass in the abdomen, and the patient agreed to the procedure. Laparotomy disclosed a large retroperitoneal "lymphoblastoma, small cell type." Palpation of the liver and the other abdominal organs revealed no other abnormalities. The patient's postoperative course was uneventful. She received roentgen therapy for the mediastinal and retroperitoneal lymphomatous process. The patient returned to the clinic 3 months later, at which time roentgenologic examination of the thorax showed that the previously described hilar mass had disappeared. Physical examination indicated that little, if any, of the abdominal tumor remained. However, additional roentgen-ray treatment was administered to the retroperitoneal area.

The patient was seen 3 months later (January, 1947). Results of physical examination were not remarkable. In March, 1948, a small nodule was noted in the right submaxillary region and the cervical nodes were enlarged somewhat on each side. Adenopathy was evident in the left axilla. Roentgen therapy was administered to these areas and additional treatment was given to the retroperitoneal area.

The patient again returned for examination

in November, 1948, and at that time she complained of backache and lymphadenopathy. Additional roentgen therapy was given to the cervical, supraclavicular, inguinal and retroperitoneal areas. In January, 1950, involvement of the right occipital, left preauricular and left inguinal lymph nodes was noted and these areas, as well as the retroperitoneal area, received roentgen therapy. Six months later additional roentgen therapy was given to the same areas.

The time was now September, 1950, some 4 years after completion of our patient's first course of roentgen-ray therapy, and after 4 years of repeated recurrences and repeated treatment. After September, 1950, this patient was seen at the Mayo Clinic on occasions until February, 1960. During this period no evidence of activity of lymphomatous disease was found and she had received no additional therapy. This was a period of 10 years! In February of 1960, however, the patient returned to the Mayo Clinic because of some degree of puffiness about the eyes and the face which had slowly increased until her neighbors had begun to comment about it. The ophthalmologists reported that the fundi were normal, but grade 2 edema of the eyelids, face and neck was noted. Proptosis was not present. It was felt that this disturbance most likely represented a recurrence of the lymphoblastoma, obstructing the lymphatic drainage of the orbit, although it might conceivably represent post-irradiation lymphedema. A roentgenogram of the thorax was reported as disclosing nothing of significance; the values for hemoglobin and the results of blood counts, blood smears and determinations of blood urea all were satisfactory. The sedimentation rate (Westergren) was mildly elevated, being 38 mm. in 1 hour. The question of myxedema had been considered by the physician at her home, but the basal metabolic rate was -13 and the patient was judged to be euthyroid by the metabolic service. Studies of protein-bound iodine were useless because of the residua of previous examinations of the gallbladder.

On this occasion I had the opportunity to see this patient for the first time. I was of course keenly interested in the early history of recurring lymphoma followed by a 10-year period during which she had been free of recurrence. It was determined that before the onset of her difficulty, as well as during the early years when she

was receiving treatment, she did much refinishing of furniture and interior woodwork which entailed the extensive use of paint and varnish removers, wood fillers, paints and varnishes. However, after the completion of this project she had not used any of these agents, and this period coincided with the intervening 10 years during which she had been free of difficulty.

The edema of the eyelids had seemed to follow the use of a hair tint; we advised that this practice be stopped and that she be observed for signs of improvement. In October, 1960, namely, 8 months after the foregoing history and observations, she wrote us to say that the "pressure" in the back of her eyes was still present and that lacrimation was increased and that the edema of the face and eyelids was still present. This situation indeed raises the question as to whether the hair tint did not reactivate the lymphomatous process, at this time present in the orbit, and whether she ought not to receive some type of specific measures in an attempt to determine what therapeutic and perhaps diagnostic effects would be. To my knowledge (October, 1961) this has not yet been done.

In this case is evident the opportunity which might have been used to good advantage in advising this patient during the early years of repeated recurrences and disability and in protecting her from paint and varnish removers as well as other solvents. She might well have been saved 3 or 4 years of repeated sessions of roentgen therapy, and conceivably she might have been spared the complication of lymphoma of the orbit (if such the lesion was), a condition I have seen in several patients with histories of this kind of exposure, more particularly mechanics and tire repairmen.

Of equally great interest, in view of this patient's history, is the fact that she has a brother in whom chronic lymphocytic leukemia developed while he was building and painting his own house. After completion of the house he did no more painting for several years, and his disease remained inactive, requiring no additional treatment. I have not, however, seen this brother as a patient.

CASE 2.—The clinical course and response of this patient to management are a constant source of satisfaction to me. Each time I see her my

faith in my theories is reaffirmed. She is a registered nurse. In early life her general health had been good, except for the necessity for appendectomy and the usual childhood illnesses. Soon after completing her training in nursing, she married and had two normal children. In 1941 a dermoid cyst of the ovary was removed. At that time results of studies of the blood and of a physical examination were normal. Repeated examinations did not disclose much of significance. In 1952 an adenomatous goiter had been removed surgically; results of preoperative laboratory tests, as well as the postoperative course, were satisfactory. Cholecystectomy had been performed elsewhere during the intervening years. In December, 1954, at the time of one of her examinations at the Mayo Clinic, the result of a bromsulphalein test of hepatic function was normal, as were values for serum bilirubin.

Vaginal hysterectomy with perineal repair was performed for menometrorrhagia on April 14, 1956. At that time results of the preoperative laboratory studies and physical examination again were not remarkable. After this operation a low-grade fever developed and continued for several days while the patient was in the hospital. She was not able to tolerate a sulfonamide drug taken orally, since it produced nausea and vomiting. (Sulfonamide powder had not been sifted into the abdomen before surgical closure.)

After the patient returned to her home the nausea continued for some time, but gradually abated, and she had no new complaints until 3 or 4 months later, when intermittent anorexia, nausea and occasional diarrhea, alternating with constipation, began to appear, as did malaise and excess fatigue. By the fall of 1956 her temperature began to increase daily to 101 or 102° F., and this was associated with drenching night sweats. Various antibiotic agents were used by her home physician without improving her condition.

The patient slowly lost weight during this period and finally, in November, 1956, was admitted to a hospital in Rochester in an attempt to determine the cause of this obscure illness. Extensive studies were carried out. A definite diagnosis was not evident. Moderate hepatosplenomegaly was found, but little else of note was recorded. The electrophoretic values for

serum proteins showed a marked "stress pattern" with low albumin. Moderate macrocytic anemia was detected, with thrombocytopenia and leukopenia with toxic changes of the neutrophils. Roentgenograms of the thorax disclosed a small effusion in the left pleural space. The value for alkaline phosphatase was elevated to 38 units and the bromsulphalein test of hepatic function revealed 14 per cent retention of dye on one occasion and 20 per cent on another. The rest of the rather extensive investigation did not disclose much.

It was felt that exploratory laparotomy should be done to establish a diagnosis. This was carried out. Moderate ascites (3 or 4 liters of clear, straw-colored fluid escaping at the time the abdomen was opened) was seen; the liver was found to be "hard and block-like," and the spleen was four or five times normal size. Biopsy of tissue from the liver was done; the pathologist reported the specimen as representing "lymphoblastoma, Hodgkin's type." Results of the rest of the abdominal exploration were not remarkable.

I saw this patient in consultation after the operation, and I discussed the situation with her and her husband. The question of the effects of a reaction to sulfonamide drugs was considered, and then I found that she had an oil-burning space heater in the farmhouse and that the husband used numerous insecticides with which his clothes often were contaminated when he came into the house. Considerable painting and redecorating of the home had been done, in the course of which the patient was moderately exposed to paints during the summer in which her illness had begun.

In outlining a program of treatment, I advised the husband to return home and to change the heating system, to get rid of all paint solvents and other volatile hydrocarbons about the house, and to make arrangements to change his farm clothing in the barn before he entered the house. I then gave the patient 17.5 mg. of TEM (Triethylene Melamine) in divided doses during the postoperative period. Ascites developed again during this time and paracentesis had to be performed.

After the foregoing procedures the patient did amazingly well. I saw her in March, approximately 4 weeks later, and gave her 15 mg. more of TEM in divided doses of 5 mg.

The patient again returned in June, 1957, 3 months after the previous dismissal. She said that she was "feeling wonderful"; in fact, feeling better than she had felt for years, and the fatigue, vague malaise and gastrointestinal symptoms had disappeared completely. This patient never received any other specific treatment than the 37.5 mg. of Triethylene Melamine given during the postoperative period. I have continued to see her at intervals of about 6 months since that time. Results of physical examinations and laboratory studies, including tests of hepatic function, have been completely normal.

In May, 1960, a urinary infection developed which required some type of therapy (not sulfonamide) and in September, 1960, she was attacked by pneumonia in the lower lobe of the left lung for which she received antibiotic therapy. The latter condition caused me some concern on the possibility that the lymphomatous process might have returned, but the pneumonia cleared promptly under treatment. Results of studies of the blood and sputum were negative. Three weeks later the value for hemoglobin was 12.6 gm. per 100 cc. of blood; erythrocytes numbered 4,600,000 and leukocytes 3,000, per cubic millimeter of blood, a differential count of the leukocytes showing the percentage of lymphocytes to be 31.5; of monocytes, 13.0; of neutrophils, 50.5; and of eosinophils, 5. The sedimentation rate was 26 mm. in 1 hour (Westergren). Such mild leukopenia and monocytosis would be somewhat worrisome, but it is possible that some degree of pneumonic resolution might still have been proceeding. To the time of this report (October, 1961) there was no evidence of recurrence of the lymphoma. Although the lapse of time since the exploratory laparotomy and biopsy is only 5 years (already past the statistical life expectancy of a person who has this disease), I am relatively confident that she will continue to do well as long as we continue to advise and protect her. In a case such as this it is obvious that there is the opportunity for patient and physician to work together in such a way that the patient with a seemingly progressive fatal disease can be maintained through a useful existence of normal life expectancy.

CASE 3.—This patient was admitted directly to my hospital service in January, 1957. She had

the most massive lymphadenopathy I have ever seen: the cervical and axillary nodes were tremendous. A roentgenogram of the thorax (Fig. 1) was reported to show: "Widening of the superior mediastinum by large lobulated masses, more marked on the right. There is extensive lymph node enlargement in the right hilus and there is increased density behind the right side of the heart, probably due to similar masses."

The patient was febrile; moderate anemia was disclosed, the value for hemoglobin being 10.4 gm. per 100 cc. of blood. Mild leukocytosis with toxic changes also was present. The electrophoretic pattern showed the albumin to be markedly reduced to 2.21 gm. per 100 ml. of serum, and the alpha-2-globulins were moderately elevated to 0.86 gm. per 100 ml. of serum. The result of the thymol turbidity test was 11 units. Biopsy of tissues from lymph nodes was performed; the result was the diagnosis of Hodgkin's disease.

Clinically, the situation seemed hopeless to me and I advised the husband of the serious nature of Hodgkin's disease, as well as pointing out the extensive involvement in his wife's condition. After the results of biopsy and this gloomy discussion with the patient's husband, a course of roentgen therapy was administered (January, 1957). The patient and her husband returned in June, 1957. The abatement of the adenopathy was remarkable (fig. 2), and her general health was improved. A second course of roentgen therapy was given.

At this time we discussed the various agents to which the patient had been exposed. I gave the husband and wife my ideas of the relationship of environmental agents to Hodgkin's disease. This couple had a son who was able to take over the farm and operate it, and so the parents decided to move to town. There had been an oil space heater in the farmhouse; they changed their type of heating when they moved to the city. Moreover, the patient avoided all her previous significant exposures and contacts discussed earlier. Except for a period of depression requiring some electroshock therapy, this patient remained well until the time of this report. She received no treatment for her Hodgkin's disease during the intervening period, and showed no evidence of recurrence. It is of interest, however,

to point out that some degree of residual widening is evident in the hilar shadow on the right which had been unchanged during the 4½ years (fig. 3 and 4). It is interesting to speculate as to whether this change represents residual Hodgkin's disease which could be reactivated at any time she is additionally exposed to noxious agents, or whether it is simply an area of fibrosis remaining from the previous massive involvement of the thorax. I believe it represents potentially explosive disease.

CASE 4.—A woman 31 years old came to the Mayo Clinic in April, 1951. She had been referred by her physician because of severe anemia which responded to no type of therapy he had used. Results of laboratory studies were thus: hemoglobin, 6.8 gm. per 100 cc. of blood; erythrocytes numbered 1,600,000 of which 5.9 per cent were reticulocytes; blood platelets amounted to 21,000 and leukocytes to 1,800, per cubic millimeter of blood. In the differential leukocyte count lymphocytes constituted 60.5 per cent, monocytes 4.5 per cent, neutrophils 33.5 per cent and eosinophils 1.5 per cent. Examination of blood smears disclosed macrocytosis with moderate polychromasia. Thrombocytopenia, leukopenia and marked toxic changes were obvious, but no immaturity was found. Study of marrow obtained by sternal aspiration revealed the marrow to be fairly cellular, with an increase and a shift to the left in the erythroid elements, while active hyperplasia was detected in the fixed sections. This seemingly incompatible combination of hematologic findings is rather common in the presence of refractory types of anemia, particularly those secondary to some noxious agents. I commonly refer to the bizarre phenomenon as "benzene marrow."

Gastric analysis carried out with histamine stimulation revealed normal acidity. Roentgenograms of the esophagus, stomach and duodenum disclosed nothing of significance, but roentgenograms of the thorax brought to light a Ghon complex. It seemed that no other diagnosis than "refractory anemia" could be made. The patient was advised to return home and to continue to receive blood as needed.

It was suggested to the patient's home physician that cortisone be administered in the hope of improving a bad state. Cortisone at that time

was rather difficult to obtain, but the patient received a short course of cortisone therapy for a few weeks. There was no evident improvement; in fact, when she returned to the Mayo Clinic 3 months after her initial visit the value for hemoglobin was 4.4 gm. per 100 cc. of blood; erythrocytes numbered only 900,000, leukocytes 2,000, and blood platelets between 18,000 and 20,000, per cubic millimeter of blood. The percentage of reticulocytes was still elevated to more than 6 per cent. Another examination of bone marrow obtained by sternal aspiration gave essentially the same results as those of the previous examination of bone marrow.

I saw this patient for the first time at this visit, and inquired carefully into her history of exposure, determining that she was a farm wife and that they did milk cows of a small herd by hand, using Ily sprays for two or three months in the summer each year. However, as usually happens, the patient deprecated the possibilities of any real exposure to the spray. It must be remembered, however, that considerable exposure to these oil sprays can result from spraying the cow by hand to keep it quiet, and then sitting down on a milking stool and thrusting the head into the flank of the cow to avoid a switching tail. During such an action spray fumes are inhaled throughout the milking period.

In addition to this intermittent exposure, the patient had been exposed to some insecticidal aerosols and moth crystals which she had used about the house. Perhaps more pertinent was the fact that she used home permanent waving materials on herself and other members of the family and neighborhood. I strongly advised her to give up all these activities, with their resultant exposures, and to continue to receive blood as needed, with the idea that splenectomy might be considered if improvement did not ensue.

The patient returned home, however, despite a value for hemoglobin of only 4.4 gm. per 100 cc. of blood and an erythrocyte count of only 900,000 per cubic millimeter of blood. She refused both to receive any blood and to see her local physician. Instead, she went to bed and there she remained for the next 6 to 9 months, during which time she gradually improved and came to lead a fairly normal and active life.

All the foregoing information came to light

nearly 9 years later, in an exchange of correspondence when she wrote to the Mayo Clinic to ask if it would be safe for her to use permanent waving materials again. In our correspondence I advised her not to use such materials, in view of the fact that she had made such a remarkable recovery and had done so well during the period she had not used them. I was so interested in her condition, on the basis of letters, that I urged her to return to the clinic (at our expense) for more studies of the blood. She did so in June, 1960, and again I investigated her history of exposure. I determined that she really had avoided the various agents which I had discussed. Although the general status of her blood was not normal, the following values were recorded: hemoglobin, 11.5 gm. per 100 cc. of blood; erythrocytes, 4,230,000 and leukocytes, 3,800, per cubic millimeter of blood; differential count of leukocytes: lymphocytes 53.0 per cent, monocytes 6.5 per cent, neutrophils 39.5 per cent, eosinophils 0.5 per cent and basophils 0.5 per cent. Blood platelets numbered 109,000 per cubic millimeter of blood and the percentage of reticulocytes was 9.2. The sedimentation rate was 42 mm. in 1 hour (Westergren). Study of blood smears disclosed mild anisocytosis and polychromasia, with occasional stippling of erythrocytes. Lymphocytes tended to be basophilic mesolymphocytes, but no immature forms were present. The electrophoretic pattern of serum proteins was normal. It is obvious from these values that the patient still had a disturbance of the erythropoietic system, but she would not permit studies of bone marrow. The chief features were mild hypochromic anemia, mild leukopenia with a neutropenia, mild thrombocytopenia and a rather high percentage of reticulocytes, 9.2, suggesting a hemolytic component which time did not permit evaluating. Physical examination revealed no adenopathy or splenomegaly. This, of course, was 9 years after her initial difficulties and it must be admitted that at that time none of her consulting physicians had anticipated that she would ever recover. I think it is obvious why I again stressed the warning that she avoid all exposures possible and that she have no permanent waves, either at a professional beauty shop or at home.

CASE 5.—An electrician, single, lived with his

parents in a small village in a house in which fuel oil was used for winter heating in an oil-burning space heater. In my experience, oil-burning space heaters are of great significance in the production of many of these blood dyscrasias, particularly the type of heater which has a reservoir on the back of the stove which is filled periodically with 3 to 5 gallons of fuel oil. This reservoir of fuel oil is kept warm constantly by heat from the stove and can gradually evaporate the lower boiling fractions of the distillate into the living quarters of the people involved. Moreover, when the burner on this type of stove is turned low, as is commonly done during the night, combustion may not be as satisfactory as it would be at a higher heat, with the result that additional fumes may escape into the room. Such a condition may be of considerable significance when members of the family sleep in close proximity to the stove. An additional factor is the possibility that if these space heaters are not kept clean, deposits of carbon form and combustion is poor.

The patient in this case gave such a history when he came to the Mayo Clinic in November, 1956 (about 2 months after the usual space heater is lighted for the winter), because of an abdominal mass, fever, loss of weight, night sweating and abnormalities in values for components of the blood. Surgical exploration for this mass revealed a retroperitoneal tumor described as a "grade 4 malignant neoplasm, probably lymphosarcoma of the reticulum cell type." After a satisfactory postoperative course, roentgen therapy was administered to the retroperitoneal area. Two months later a second course, and a year later (January, 1958) a third course, of roentgen therapy was given.

I reiterate that it is of interest to note that the appearance of this man's original difficulty occurred after the space heater had been in use for some weeks in the fall, and it is also of interest to note that in the second year it was January when he returned with reactivation of his lymphoma. It was at this time that I first saw this patient and obtained the foregoing history. I advised him to get rid of the oil space heater as soon as possible, and this he did in the spring of 1958. A new gas heater was used during the following year, and then electric heating was employed. I last saw him in 1961, 3 years since he had last received roentgen-ray treatment and

since the oil space heater had been removed. At that time he had no symptoms of recurrence of the reticulum-cell sarcoma as shown by either abnormal results of laboratory studies or of physical examination.

CASE 6.—A 24-year-old man, a service repairman for an electric utility company, came to the Mayo Clinic in December, 1954. He said he had felt an enlarged mass or "lump" in the right side of his neck on November 30, and that on the next day a section of the mass had been removed for biopsy. The referring physician said that the large node, and several satellite nodes were present, and that he had removed two for biopsy. A reticulum-cell sarcoma was diagnosed by the pathologist in Minneapolis as well as by one of our pathologists. The patient was referred to the Mayo Clinic with the suggestion that radical dissection of the lymph glands of the neck be performed, particularly since some degree of residual lymphadenopathy was present.

However, at the initial examination of the patient at the Mayo Clinic his consulting physician judged that the tip of the spleen was definitely palpable and that, therefore, generalized reticulum-cell involvement was present. It is of interest to note, however, that the spleen was not palpated at any other time. Radical dissection of the lymph glands of the neck was not carried out; instead, roentgen therapy to the localized process in the right cervical area was administered. Results of laboratory studies revealed no abnormalities: the value for hemoglobin, 13.7 gm. per 100 cc. of blood, had been relatively constant during the preceding 6 years, while normal erythrocyte and leukocyte counts, as well as leukocyte differential counts, and results of examinations of smears of peripheral blood and of roentgenograms of the thorax were not significant.

As might be inferred from the above, this patient has been seen regularly at the Mayo Clinic since 1954, the last examination being in December, 1960. To the date of this report there was no evidence of recurrence of the reticulum-cell sarcoma.

This report is another one which involves fuel oil and an oil-burning space heater, since this patient was living in a house heated by an oil-burning space heater at the time the reticulum-cell sarcoma nodes appeared at the end of No-

vember, 8 to 10 weeks after the stove would be put into winter operation. A hot-water heating system was installed in this patient's house soon after this incident, and he experienced no other exposures save those in which he might be involved as a serviceman for an electric power company.

CASE 7.—A man was seen at the Mayo Clinic on three occasions preceding an admission on February 19, 1955, which was the visit of importance in the present discussion. After his previous visits a nonfunctioning gallbladder had been removed, and gastroenterostomy had been performed for a duodenal ulcer and a nasal operation had been done for an obstructive deflected intranasal septum, with bilateral construction of antral-nasal windows to relieve suppurative sinusitis. At the time of these three visits results of laboratory studies were not remarkable. They may serve as bases for comparison with results of similar procedures at the time of his visit in 1955. These values were: hemoglobin, 15.8, 15.2 and 14.6 gm. per 100 cc. of blood; erythrocytes ranged between 4,760,000 and 5,130,000 per cubic millimeter of blood. Leukocytes numbered 7400, 6100, and 7700 per cubic millimeter of blood; differential counts of the leukocytes were not done. All other results of laboratory studies were either normal or negative, so far as any abnormal changes are concerned, and the procedures included urinalysis, roentgenograms of the thorax, serologic tests for syphilis and determinations of the sedimentation rate.

This patient visited the Mayo Clinic in February, 1955, because of a hydrocele for which he wished surgical treatment. In addition, he had a generalized pruritus which a dermatologist judged to be fundamentally asteatosis. The physical examination disclosed nothing remarkable other than the hydrocele and excoriations of the skin; specifically, neither hepatosplenomegaly nor peripheral lymphadenopathy was found. All results of laboratory studies were normal with the exception of leukopenia in which leukocytes numbered 2700 per cubic millimeter of blood and repeated counts all showed a persistence of this condition. Percentages for leukocytes in the differential studies were lymphocytes, 50.0; monocytes, 1.5; neutrophils, 47.5; eosinophils, 0.5 and basophils, 0.5. Examination of a

blood smear showed no abnormalities other than the neutropenia, and because of this, aspiration of bone marrow was carried out. Study of this material revealed only "an active marrow."

Questioning of the patient disclosed that he had been subjected to the following exposures.

First, he had used benzene hexachloride (hexachlorocyclohexane) or "B.H.C." extensively as a louse powder for his herd of cows. Many farmers and ranchers dust this insecticide into the long, hairy coats of their cattle in the winter-time when the cattle are confined to relatively close quarters and problems of lice, fungus and other problems of the hide are common.

Second, he had used extensively a solvent to clean out varnish and other deposits from the engines of his tractors, trucks and cars, getting considerable amounts of the solvent on his skin as well as inhaling a moderate amount of it.

Third, like most grain farmers, he had used organic mercurial and copper fungicides to treat his grain seed.

In view of his persistent leukopenia he was advised not to undergo surgical treatment for his hydrocele, and he was further advised to avoid all exposure to the various insecticides, motor fuels and solvents, as well as the organic fungicides, and to have his blood examined periodically.

The patient had his blood re-examined in his home community, and in due time the components returned to acceptable values. In June, 1955, he was operated upon for the hydrocele. He returned to the clinic 6 weeks later, namely, July 28, 1955, with a letter to our dermatologists in which it was said, in part, that the patient had an "itching forehead, face, upper chest and trunk as well as some on the thighs." Improvement had not resulted after the treatment previously advised; he had been given sulfapyridine on the basis that the involvement of the skin might be dermatitis herpetiformis, but again had shown no improvement. Then the question arose of whether or not mycosis fungoides was present, and study of sections of the skin taken for biopsy was reported as showing a condition "quite consistent with mycosis fungoides." The patient had received roentgen therapy to the involved areas.

Upon his return to the clinic in July, 1955, the

patient was treated topically with lotions, wet dressings of aluminum subacetate, hydrocortisone ointment and other measures, with progressive improvement of the skin. Results of various patch tests were negative and further studies of sections of the skin of the neck were interpreted as "showing a nonspecific dermatitis with cyst formation" and "senile elastosis with nonspecific dermatitis." It was judged that the affection of the skin was primarily a prurigo type of neurodermatitis.

Results of laboratory studies on this occasion were: hemoglobin, 12.8 gm. per 100 cc. of blood; erythrocytes, 4,360,000, and leukocytes, 4000, per cubic millimeter of blood; differential determination of the leukocytes: lymphocytes 24.0 per cent, monocytes 5.0 per cent, neutrophils 70.0 per cent, and eosinophils 1.0 per cent. The blood smear was reported as "not diagnostic." Results of other laboratory procedures were non-contributory, and the general physical examination disclosed nothing remarkable. The patient was reassured as to his condition and dismissed from our care. It should be noted at this point that in view of the relatively normal results of blood studies as recorded at his home, as well as those found at the Mayo Clinic and the reassurance given him, the patient returned to his former ranch activities and to the use of the various agents which I believe had been responsible for his previous leukopenia.

Approximately 15 months later his local physician wrote to say that the patient had "what looks like either leukemia or myelofibrosis." Laboratory studies revealed that his platelets numbered 80,000 and leukocytes between 25,000 and 50,000 per cubic millimeter of blood; with reticulocytes ranging from 6 to 12 per cent. Aspiration of bone marrow was done and specimens of both peripheral blood and bone marrow were sent to us for an opinion. These were examined by one of my associates, who reported that "this is the picture of a subacute to acute leukemia in both peripheral blood and bone marrow smears."

After that time the condition of the patient progressed as subacute myelogenous leukemia and the lesions of the skin became manifest as leukemic cutis. I believe that we lost the opportunity of rediscussing with this patient the importance of continual avoidance of all the agents

which initially probably had been responsible for his leukopenia. It is always difficult to know whether a patient can resume his previous occupation or activities which subject him to renewed exposure without producing more serious consequences. I personally believe that the renewed exposure, after the period of freedom from such exposure, meaning intermittent exposure, probably is an important mechanism in activating or inducing the mesenchymal tissue to react and evolve into a leukemic or a lymphomatous state. In this instance the patient died of myelogenous leukemia in August, 1959, approximately 4½ years after the initial leukopenia was found.

CASE 8.—This patient, in my opinion, is a victim of one of the newer "gadgets" which have invaded American life in the last few years; namely, a lindane fumigator or vaporizer which can be installed and maintained by the professional exterminator or which can be purchased from various sources for self-installation. These vaporizers usually contain a heating element which is controlled thermostatically and is heated to a point at which lindane crystals (gamma-isomer of benzene hexachloride) can be vaporized slowly into the room. Inexpensive vaporizers, such as one in the form of a plastic grooved ring to be placed over an upright light bulb, or even an electric light bulb with a dent on the top to contain the crystals, are available in many stores. Lindane, of course, is a potent insecticide used extensively both on farms and in the urban areas for the control of flies, moths and other pests. In the urban areas these vaporizers commonly are used in clothing stores to prevent depredations by moths, in food markets to reduce the fly population and in homes for the control of various types of insects.

I believe that the patient in the present case was a victim of lindane vapors. She is the wife of a farmer, and she had been a music student before she was married. After the couple were well established on their farm her husband enclosed a porch of the house and made a music room for her, putting in a new rug, piano and other furniture. To protect this room from moths and insects, a lindane vaporizer was installed over the piano. The patient would play the piano at odd hours during the day or evening when not otherwise occupied. There was

no history of other exposure, since her household duties kept her indoors most of the time and she did not help her husband with any of the farm-work or chores. After she had used this lindane vaporizer in her music room for 2 years, she gradually became anemic and was seen by her physician in October, 1957. He found her to be severely anemic, with a value for hemoglobin of 5.4 gm. per 100 cc. of blood, and erythrocytes numbering 1,800,000 and leukocytes 5900 per cubic millimeter of blood. She was given 1 unit of blood at once, and 3 more during the month of October, 4 more units during the month of November and 4 additional units during the month of January, for a total of 12 units of blood within about 12 weeks. The last 4 units were administered just before she was admitted to the Mayo Clinic in January, 1958. At the time we saw her the value for hemoglobin was 11.8 gm. per 100 cc. of blood; erythrocytes numbered 4,600,000, leukocytes 4400 and platelets 148,000, per cubic millimeter of blood. The differential determination of the leukocytes was not remarkable, but the percentage of reticulocytes was zero. Studies of bone marrow showed active, left-shifted myelopoiesis, but the erythroid line was almost, if not entirely, nonexistent. We think that what was at hand was essentially a pure red-cell aplasia. Other findings were a high value (200 micrograms per 100 ml. of serum) for iron and indeterminate indications in roentgenograms of the thorax and results of serologic tests for syphilis, the physical examination and the sedimentation rate. After studying her hematologic problem and obtaining the foregoing history of exposure, I advised the husband to take out the lindane vaporizer, clean up the room (there was a deposit of lindane crystals on the ceiling above this vaporizer) and continue to see that his wife received blood as indicated.

I heard no more about the patient until December, 1960, when she and her family paid me an unexpected social call. She advised me that they had carried out my suggestions in respect to lindane, but that she had not received blood at all during the 3 years prior to this visit. Since the patient's call was unexpected, almost at closing time of the clinic on Saturday, I was able to obtain only a few studies of the blood, results of which were: erythrocytes numbered 3,810,000 and

leukocytes, 3600, per cubic millimeter of blood; percentage of reticulocytes, 0.9; and platelets, 182,000. Examination of a blood smear disclosed nothing remarkable. According to her, the hemoglobin content, determined in her home city, had been relatively normal.

CASE 9.—This patient, the owner of a supermarket, likewise had been exposed considerably to the emanations of a lindane vaporizer. There are, of course, numerous agents to which such a person may be exposed in the cleaning, maintenance and decorating of a store of this type. However, it is of interest to note that he had a lindane vaporizer above his desk in the office to keep it free of flies during the summer. In October, 1954, surgical treatment of a rather extensive carcinoma of the thyroid gland had been carried out at the Mayo Clinic. Metastasis to lymph nodes was found. Physical examination at that time disclosed a large right tonsil, but this was not further investigated.

In the ensuing year (1955) he returned for re-examination of the state of his thyroid gland; no evidence of local recurrence of carcinoma was found. The right tonsil, however, was still enlarged, and definite cervical and axillary lymphadenopathy was detected. It was judged at that time, of course, that the carcinoma might have recurred and so biopsy of sections of lymph nodes was done. This demonstrated a reticulum-cell sarcoma involving the tonsil and the enlarged lymph nodes. Roentgen therapy was administered. I discussed with him the need of avoiding the multiple potential sources of exposure in his store and urged removal of the lindane fumigator from his office. In 1961, six years after the diagnosis of reticulum-cell sarcoma had been established, there was no evidence of recurrence of either this lesion or of carcinoma. The patient has assiduously avoided exposure to lindane and other noxious agents.

CASE 10.—The condition of a housewife 52 years old constitutes a demonstration of changing clinical disease states which illustrates my concept of a mesenchymal dyscrasia evolving into different entities at different times. This patient first came to the Mayo Clinic in October, 1956, after she had been found to have posterior and anterior cervical lymphadenopathy, as well as involvement of axillary and inguinal nodes. Biopsy

of a section from a cervical node had resulted in a diagnosis of "hyperplastic lymph node," but the patient's physician had not been satisfied with this diagnosis, in view of the generalized lymphadenopathy. Thus he sought additional consultation.

A pathologist at the Mayo Clinic reviewed the tissue taken for biopsy and made a diagnosis of lymphocytic lymphosarcoma. As I have pointed out previously, such an experience is commonplace in such situations as (1) different pathologists' rendering different diagnoses on the basis of study of the same biopsy material, (2) the same pathologist's arrival at such diagnoses as "inflammatory," "hyperplastic" and "malignant lymphoma" on the basis of study of lymph nodes from different areas, (3) results of successive biopsies which yield data suggesting a changing character of the disease, such as an initial diagnosis of "Hodgkin's paragranuloma" followed by one of "Hodgkin's lymphoma" followed by one of "reticulum sarcoma." Let such experiences not dismay you!

After a general examination and the usual laboratory studies, roentgen therapy was administered to all the peripheral node-bearing areas and the patient was advised to return a month later for re-examination.

When she returned to the Mayo Clinic in November, 1956, the patient said that the lymphadenopathy had decreased considerably immediately after the roentgen therapy, but that the glands again were enlarging. At the time of the visit in 1956 the patient also had generalized urticaria and pruritus which had developed after she had taken a prescribed tranquilizer. This patient gave a long history of sensitivity to various inhalants, liver extract, medications and other agents, as do so many afflicted with the "mesenchymal dyscrasias." She again received roentgen therapy to the node-bearing areas.

Two months later (January, 1957) she was seen again; some small, shotty peripheral nodes were noted, but they were considered to be insignificant. The patient was feeling very well.

The patient returned about every 3 months for re-evaluation. No change in her condition was noted until February, 1958, at which time she was admitted to the hospital because of extensive petechiae on the legs, arms and trunk, numerous

ecchymotic areas of the skin and severe epistaxis which had begun just before hospitalization. Acute thrombocytopenic purpura (platelet count, 28,000) was responsible for the later state. Physical examination, except for disclosing the marked purpura, produced nothing remarkable; laboratory studies revealed only thrombocytopenia. In view of this history of recurring lymphadenopathy, exhaustion and vague general malaise now complicated by acute thrombocytopenic purpura, L.E.-cell preparations were made. Typical L.E. cells were found in all the preparations. An electrophoretic pattern of the serum proteins was made for the first time; it indicated mild elevation of gamma globulins, the rest of the pattern being normal.

This was, then, a patient who had experienced multiple sensitivities or allergies followed by lymphocytic lymphosarcoma and then acute thrombocytopenic purpura ("I.T.P.") and, finally, the presence of the L.E.-cell phenomenon. In other words, four acceptable clinical entities had been present, all of which I believe were related as "differentiated mesenchymal dyscrasias." Steroid therapy produced very prompt remission of the purpura.

This patient always had been very active; in addition to her pursuits as a wife and a mother, keeping up her own home, she taught school in a small country schoolhouse heated with an oil-burning space heater during the winter, operated a "frozen-custard" type of refreshment stand throughout the summer, with the consequent exposure to insecticides and automobile exhaust fumes which this would entail, led the choir in her church and carried on multiple other activities. The patient was advised to abandon all these responsibilities and to obtain adequate rest, and to treat herself as if she had systemic lupus erythematosus. This stringent program, including protection from the sun's rays because of mild sensitivity, was not easy to maintain but she succeeded and did very well, relying upon a minimal amount of steroids to supplement the program. However, it was found that when she reduced the dose of methyl prednisolone (Medrol) to zero, petechiae began to appear and the number of platelets became low again. It was also noted that if she was too active additional amounts of steroid were required. However, by avoiding

excesses, she had been able to control her condition until the time of this report relatively well with 2 mg. of methyl prednisolone or the equivalent taken twice daily.

In January, 1961, I again saw this patient. At that time the mesenchymal dyscrasia was in its most interesting phase. A short time previously the axillary lymph nodes had enlarged progressively, but she complained of no new or associated difficulties, and no other peripheral adenopathy was present. There was no splenomegaly. I questioned her carefully about her history; she said she had been using a new underarm deodorant for a few months prior to this visit, but she did not relate the use of this agent to the recurrent lymphadenopathy.

My attention was captured by the possibility of that what had developed might be a localized recurrence of the lymphocytic lymphosarcoma, and I urged her to allow sections of axillary lymph nodes to be taken for biopsy. She agreed, and the resulting report from the surgical pathologist verified the diagnosis of lymphocytic lymphosarcoma. It should be noted that at this time results of an inquiry for the L.E.-cell phenomenon were negative, as were those of the rest of the laboratory studies, although she had been using only 2 mg. of methyl prednisolone twice daily with her "protective program."

For the sake of scientific observation I urged that the patient not receive any roentgen-ray therapy to the axilla but that she simply stop use of the deodorant in question. Since she is most cooperative, she agreed to do this. Correspondence six months later advised me that her condition continued to remain about the same; the axillary nodes at that time were perhaps a little smaller than they had been, and there was no additional lymphadenopathy.

CASE 11.—An 18-year-old college student from a medical family was referred to me in June, 1956, because of a diagnosis of Hodgkin's disease which had just been established by biopsy of sections from cervical lymph nodes. In the late fall of 1955 the patient had noted enlargement of a mastoid node on the left; the enlargement did not seem to change during the winter, but in the late spring it became progressively greater until the time it was removed along with a small satellite node.

Physical examination was done in June, 1956. The patient was well developed, with no physical abnormalities. Specifically, neither peripheral lymphadenopathy nor hepatosplenomegaly was present. Results of laboratory studies also were negative or normal, except as noted below. Our pathologists, after examination of sections of lymph nodes, agreed that the condition at hand was Hodgkin's paragranuloma.

Initially this patient's history seemed entirely unremarkable and noncontributory. Still, there was a strong history of vasomotor rhinitis and chronic sinusitis, with almost continuous difficulties throughout the previous winter. This boy was attending a college in a geographical area subject to much change in temperature and weather, a typical situation for the chronic aggravation of vasomotor rhinitis and associated sinusitis. Roentgenograms revealed thickened membranes in both maxillary antra, as well as in the right ethmoid and the frontal sinuses.

Examination of the ears, nose and throat showed the septum to be somewhat deviated; the anterior ends of the midturbinate processes were pale and somewhat polypoid, suggesting an allergic nasal membrane. The tonsils were enlarged; plugs were present and a small amount of adenoidal tissue was seen. Since nothing had been noted in roentgenograms of the sinuses or during nasal examination to suggest active infection to the otorhinolaryngologist, no therapy was recommended.

It seemed to me that the condition of the upper part of the respiratory tract might be an important etiologic factor in the lymphoma, and so I had material from the nasopharynx cultured. The result was demonstration of an indeterminate type of *Neisseria*, a green-producing streptococcus and a nonhemolytic type of streptococcus. These organisms were isolated and a vaccine of the killed organisms was made from each type for skin tests. (I might say that I have done this in many cases of lymphoma.) The results were: (1) the control test yielded no reaction; (2) the test done with vaccine made from *Neisseria* organisms produced a 4-by-7 cm. reddened, indurated reaction which was graded as 4 on a basis of 1 to 4; (3) the vaccine made from the nonhemolytic type of streptococci produced a grade 3 to 4 reaction consisting of a zone 2 cm. in diameter, heavily in-

durated and reddened; and (4) vaccine made from the green-producing streptococcus caused a zone 4 by 6 cm. which was indurated and red and was graded 4.

I made a number of suggestions to this boy and to his parents.

First, I recommended that he leave the college and the geographic area in which he was subject to so much infection of the upper part of the respiratory system and attend a school in a warmer climate. This was done.

Second, I advised that any upper respiratory infections which did occur be treated promptly by rest in bed and appropriate but cautious antibiotic therapy.

Third, I counseled the patient to protect himself from the changes in temperature which cause difficulties in people afflicted with vasomotor rhinitis, and to avoid other irritating agents.

Fourth, I recommended that he receive a course of roentgen-ray therapy to the local area from which the tissue for biopsy had been obtained.

Fifth, I suggested that he avoid other agents, and especially the hydrocarbons, which I discussed with him.

All these suggestions were carried out. During the ensuing year he had no difficulties and no recurrence of the lymphadenopathy. Results of periodic examinations conducted at home during that year, as well as my findings when I saw him again in 1957, were entirely satisfactory; the sedimentation rate was normal and a roentgenogram of the thorax disclosed nothing of significance. After that time he continued to follow the suggestions of the programs outlined above; he was periodically examined by his local physicians and at the time of this writing (October, 1961) nearly 5½ years after the original biopsy, he had had no recurrence of Hodgkin's disease and continued to maintain himself very well indeed.

CASE 12. A housewife 28 years old had been seen on numerous occasions at the Mayo Clinic, but in January, 1961, she returned requesting a general examination because of persistent fatigue and vague malaise. Results of a general physical examination were not remarkable, but laboratory studies revealed definite neutropenia. The value for hemoglobin was 12.8 gm. per 100 cc. of blood; the percentage of reticulocytes was 1.2; erythrocytes numbered 4,040,000 and leukocytes 3600,

per cubic millimeter of blood; in the differential count of leukocytes, lymphocytes amounted to 43.5 per cent; monocytes, 12.5 per cent; neutrophils, 43.0 per cent; and eosinophils, 1.0 per cent. Platelets amounted to 189,000 per cubic millimeter of blood.

This patient had lived with her husband on a farm which he had worked actively until a few years prior to the visit in question. An industrial job for the husband proved to be more profitable for the family than the proceeds from the farm, and the farm no longer was worked. Members of the family still lived in the farmhouse, but carried out no farming operations. Significantly, however, this abandonment of active farming permitted the patient to devote more time to tasks in the house, and she had refinished an old desk as well as some other pieces of furniture during the summer of 1960. She said she had not felt well in the 4 or 5 months since she had done this work. The refinishing of course involved the use of varnish removers, wood fillers, stains and varnish or paint. The patient was advised to avoid all additional exposures, the types of which were discussed with her. Six months later there were no new developments and the results of studies of the blood were almost identical to those of the previous visit. It is of interest to note that the son of a sister of the patient, a child 4 years old, recently died of leukemia.

This patient's problem, as well as those in the few cases to follow, raised the very real question as to what extent the physician may carry his counsel, when his advice might mean changing their occupations and hobbies, dwelling in different climates, avoiding various types of exposure on a farm or the smog in a city, on the basis of the possible development of a so-called dread disease when only suggestive, but not diagnostic, signs are present. Personally, I judged that I was fully justified in advising this young woman to avoid future exposures to the various hydrocarbons and other agents which might be detrimental to her. My opinion was and is that in view of the leukopenia, her sense of ill health and the family history of leukemia, she should avoid such exposures and be unusually cautious in the future.

CASE 13. In this case the situation was similar to that of the preceding case in that nothing very definite was present, but I think that the po-

tentials of difficulties in the future are very real. A boy 16 years old was brought to the Mayo Clinic by his mother in December, 1960, because of cervical lymphadenopathy that had persisted for the two months prior to the visit. The history of this patient suggested an attack of rheumatic fever in 1958 when he was 13 years old. At that time the sedimentation rate had been high, and culture of material from the throat had demonstrated streptococci. The patient had gone to bed and antibiotic therapy was carried out. There seemed to have been no evidence of the subsequent development of rheumatic endocarditis.

Physical examination disclosed bilateral, discrete, cervical lymphadenopathy which appeared to me to have no explanation in the data from examinations of the ears, nose and throat. The sedimentation rate was normal; erythrocytes numbered 5,300,000 and leukocytes 7500 per cubic millimeter of blood; the value for hemoglobin was 13.7 gm. per 100 cc. of blood; in the differential count of the leukocytes the percentage of lymphocytes was 41; of monocytes, 6.5; of neutrophils, 47; and of eosinophils, 5. Occasional late myelocytes were noted. I suggested that biopsy of tissue from one of the lymph nodes would be fully justified, and the patient and mother agreed. A cervical node was removed for this purpose and the diagnosis of "follicular hyperplasia" was made by the pathologist. As I have noted previously, "follicular hyperplasia" is a diagnosis very commonly made for many patients who later come to have persistent lymphadenopathy which subsequently becomes definite, malignant lymphoma proved by biopsy.

As I have said, I am never reassured by the diagnosis of "inflammatory lymph node" or "hyperplastic lymph node" or "follicular hyperplasia," and I am increasingly suspicious of such terms.

Hence, I sought a cause for the lymphadenopathy in this case. Questioning the mother, I learned that she had had professional exterminators come into the house because of an infestation of moths in the wall-to-wall carpeting. A lindane vaporizer had been installed and was used to fumigate the room with lindane vapors throughout the summers of 1959 and 1960. This boy's persistent lymphadenopathy had developed in the fall of 1960, when the fumigator was still

in use. At the time I suggested no other treatment than removal of the lindane vaporizer.

I saw the patient in February, 1961, two months later. At that time the lymphadenopathy had almost disappeared. So far as I know, he has had no recurrence. My view is that the condition of this boy will have to be watched carefully in the future and that he will have to be protected from variable exposures. Consideration will have to be given to the type of work the patient does, and any occupation or profession he might wish to select as a life's work should be studied carefully so that he may be protected from additional insult which might result in a full-blown lymphoma or other type of blood dyscrasia. I believe I am justified in discussing a situation of this sort with both the patient and his parents; the choice as to what course of action they wish to follow then remains with them.

The next two cases represent gratuitous discoveries such as are commonly made during the routine performance of general examinations. In these instances executives of companies who come to the Mayo Clinic yearly for such purposes were being examined.

CASE 14. An industrial supervisor was largely involved in the handling of diesel engines and thus had been exposed to much diesel fuel during the years before he was examined at the clinic. To the time of this report we had examined him for 4 consecutive years. At each examination he had leukocytosis in which the total number of leukocytes ranged between 12,000 and 15,000 per cubic millimeter of blood, but the differential determination of the leukocytes was normal. Results of other laboratory studies and of a physical examination were well within normal limits.

In retrospect, the foregoing hematologic aspects have not been uncommon in some instances of chronic myelogenous leukemia after careful review of the history and after reconsideration of the data from previous blood counts. Certainly, it is not unusual to find such unexplained, abnormal hematologic observations as precursing characteristics of a more serious future condition of the blood. In addition to the 4-year presence of unexplained leukocytosis, unexplained acute synovitis involved one of the knees of this patient in 1949, and it is entirely conceivable that this manifestation may well have reflected an abnormal mesenchymal reaction associated to some

degree with his exposure to the various petroleum distillates with which he worked. My counsel was that he avoid future contacts with the diesel fuels and other hydrocarbons.

CASE 15. This patient is another executive who came to the Mayo Clinic for an annual physical examination. Although there were no abnormal physical findings, the value for hemoglobin was 13.2 gm. per 100 cc. of blood; leukocytes numbered 7000 per cubic millimeter of blood; a differential count of the leukocytes showed the percentage of lymphocytes to be 31; of monocytes, 12; of neutrophils, 47; of eosinophils, 9; and of basophils, 1. This hematologic condition of mild absolute neutropenia and monocytosis with eosinophilia in a person with no obvious illness is not usual. Careful questioning disclosed that during the week end before the patient came to the Mayo Clinic he had had considerable exposure to paint in his home, and that actually he had become so ill that he had been forced to stop his painting activities. In my opinion a person of this type certainly should be warned that in the presence of such a reaction to paint and the various solvents involved in painting he should use unusual precautions, since repeated exposures and reactions of the type reported are very common preliminaries to the appearance of many a fatal leukemia or lymphoma.

Comment

In closing, let me reiterate that the patient as an individual is still very much with us, and that within the categories of states I have described,

his own individual problem of leukemia, lymphoma, or collagen disease is his immediate vital concern. Consequently, when he presents himself and his problem to us as individual physicians, his problem becomes our problem, and no foundation, no endowed institute, no medical center is going to take our place or rightfully assume our responsibility. I believe very strongly that no one is in a better position to help such a patient than his own conscientious physician. If rapport has been good between the physician and the family of the patient, that physician has had the unique opportunity to know much about that patient's family history, his personal development and accomplishments, his shortcomings, the condition of his work and the community in which he lives. In short, such a physician has facts about his patient's heredity and environment which no one else possesses, and if he appraises and applies this knowledge wisely, he is in a position to do more for his patient than anyone else can do. Of course, any physician can seek consultation and advice, but he must continue to fulfill his responsibility and to share it only with discretion.

I therefore reiterate my fundamental thesis, which is that in spite of the complexities of contemporary medical practice and all the specialties of medicine, every patient still requires individual management and guidance. I hope I have made it clear that this thesis applies to management of the blood dyscrasias—this is the art, as well as the science, of hematology.

LEGENDS



Fig. 1. Case 1. Initial roentgenogram of the thorax made on January 23, 1957.



Fig. 3. Case 1. Roentgenogram of the thorax made on December 24, 1958, at the time of electroshock therapy.



Fig. 2. Case 1. Roentgenogram of the thorax made on June 4, 1957.

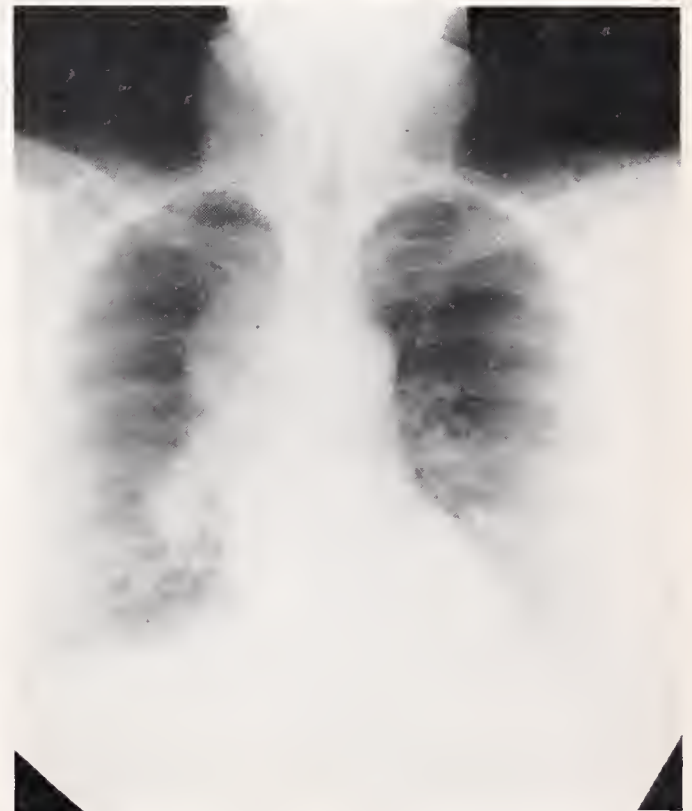


Fig. 4. Case 1. Roentgenogram of the thorax made on June 15, 1961.

AN ADDRESS ON OPERATION PLOWSHARE*

Dr. Edward L. Teller

Professor of Physics-at-Large, University of California
and Associate Director, "Operation Plowshare",
Lawrence Radiation Laboratory

SOUTHWEST SEMINAR ON MANAGEMENT
AND USES OF NUCLEAR ENERGY

August 30-31, 1961,
Hot Springs National Park, Arkansas—

MR. ROCKEFELLER:

Ladies and gentlemen, I have a heavy heart this afternoon because our seminar is coming to a close. I think that we here in this room are an expression of the fact that this seminar has been particularly stimulating to all of us. And, so it is with regret that I realize that this afternoon our conferences are going to stop and we are not going to have further opportunity to talk "shop", you can call it, with the distinguished people who have served at this conference.

Our speaker today at lunch is a man that certainly needs no introduction, Dr. Edward L. Teller. However, I am going to presume upon my role as Chairman of this conference to say a few words about Dr. Teller.

Some of you may have read or heard or speculated about a series of studies that were undertaken by the Rockefeller Brothers Fund. The Rockefeller Brothers Fund put together a panel of people who could evaluate what is going on around us. In putting together that panel it was not necessarily a question of, do all of the panelists agree with any of the ideas that any one of us five brothers might have. This is a panel to evaluate and to speak out in terms of what the individual members of the panel felt about the world situation. It ranged from Defense to economic education, a vast field. In putting together this relatively small panel, the Rockefeller Brothers invited Dr. Teller to serve as one of the panelists. Dr. Teller and I have been talking back and forth here today at lunch and we agree that in putting together the panelists we did not always agree with everything they all said, and I am sure that Dr. Teller, in talking and working with the panel

found that he did not always agree with them about what they said.

But the important thing was to get active minds, curious minds working together. And, when you think of Dr. Teller you think of an active mind, of a curious mind, of a mind with the courage to express what he thinks. I am so happy to have Dr. Teller here today—because of the close family relationship that has developed over the past few years. I know him well enough to know that you are all going to find today that Dr. Teller has been concerned with the morning news. I think Dr. Teller will probably want to comment on the morning news. Dr. Teller will speak from his heart. He will say what he believes and I know, Dr. Teller, that we are extraordinarily fortunate to have you here on this particular occasion to express your comments and views to the gathered group and to the radio audience.

So, without further adieu, ladies and gentlemen, I present to you Dr. Edward L. Teller.

DR. TELLER:

Mr. Rockefeller, thank you very much for your gracious words. Ladies and gentlemen, I am indeed proud that I have served on this panel where I learned, and all of us learned, a very great deal from each other. Throughout the discussion in which we tried to look into the next ten years, we realized that the survival of our country and the survival of the free world is at stake; that we need strong and imaginative leadership if we want to stay alive. This is clearer today than it ever has been.

I want to talk to you about the topic of discovery, about nuclear energy and its uses. You have heard many wonderful things about the

*Introductory Remarks by Winthrop Rockefeller, Seminar Chairman and Chairman The Arkansas Industrial Development Commission.

many outstanding accomplishments of the last two decades. These accomplishments we have gained under an outstanding leadership in Washington.

But, with all that, I have to tell you that the great head start we had in 1945 over the rest of the world in atomic energy matters, is no more.

Why?!

I will tell you something about my own personal experience. Forty years ago when I was considerably younger and quite a bit smaller, I liked to read science fiction. My favorite author was Jules Verne. I no longer read science fiction. This is not because I have become particularly more wise or clever. Science fiction has changed. When I was young, science fiction said, "How wonderful!!!" Today, science fiction says, "How horrible!!!"

Our greatest danger, our greatest reason why we did not make enough progress is *fear*. We are *afraid* of the power which man now holds in his hands.

My main topic today is *fear*. The first time I ran into this fear was a little more than ten years ago when the necessity arose that we work on the Hydrogen Bomb. At that time the fear of many of my outstanding and conscientious colleagues had almost—had almost—persuaded our government not to go ahead with the Hydrogen Bomb. In their alarm they said things they never should have said. They said, for instance, a Hydrogen Bomb could not be built. They were wrong because they were *afraid*.

Fortunately we were permitted at that time to go ahead and for the time being the United States retained its leadership. One of the many consequences, I would say the most psychological consequence of this progress was, that we became very much interested in the *peaceful uses* of nuclear fusion energy . . . a difficult project which required containment of a very hot gas in a strange contraption which I like to call a magnetic bottle. This magnetic bottle, on the construction of which a great future energy thrust depends, unfortunately turned out to be leaky again and again. But, I am glad to tell you that some of us in our own laboratory and probably other people, too, are beginning to find somewhat more leakproof bottles and in the course of time, this great source of energy will be available to all of us. Now, those of you who like nuclear reactors, should not get scared. We won't make

competition until, let us say, the year 2000; because the research is difficult and will take a little time.

There is progress all around us and some of this progress we have not completely or properly utilized. A lot has been done and quite a bit has been said here about the use of isotopes. You know I can't help mentioning it, yet in view of the fallout scare — this *fear* again — has deterred many of us from the full industrial and biological utilization of radio active energy.

We could place into the hands of educated farmers radiation sources by which, in a reliable and controlled manner, they can induce mutations in the vegetables and animals with which they are working. In millions of experiments they can then do what no laboratory could perform — look for the chance occurrence of something really useful in the biological and agricultural fields. We are making slow progress because we are *afraid*.

Ladies and gentlemen, I am going to now read a few sentences concerning a topic about which probably not all of you have heard; the peaceful use of nuclear explosions, ("Project Plowshare.") These sentences say: "Right now, we are utilizing atomic energy for our economic needs, in our own economic interests; we are razing mountains, we are irrigating deserts, we are cutting through the jungle and the tundra, we are spreading life, happiness, prosperity and welfare in places where in the human footsteps have not been seen for a thousand years." I am *not* quoting an American statement from the year 1959; I wish I were. I am quoting a statement of Mr. Vishinsky of the year 1949.

In the year 1956, there had been announcements of several explosions in China—the biggest one—9,200 tons of TNT in Hankow(?)—the announced purpose — uncovering deep-lying ore bodies for cheap surface mining — cheap strip mining.

In the years 1957 and 1958 there had been announcements of three explosions on the river Kolongo near the Urals for diverting this river — again with explosives amounting to thousands of tons of TNT. The Russians said they did all this with *normal* high explosives. When we said we were interested—will you please show us—we got an answer which even I with my limited Russian vocabulary could understand. The answer was "Nyet!"

We therefore "know" that these explosions have been "conventional" explosives on the "good authority" of Russian words and on *no* authority other than that.

In the meantime, we have gone ahead and explored, at least on paper, the possibilities of using nuclear explosives for peaceful purposes. We have found that we can make harbors anywhere in the world at a cost we used to pay merely to equip a harbor. We can make water fill a canal. We can multiply, not add to—but multiply—the available raw material supply in the most essential items of coal and iron throughout the world. In other words, we can divert rivers, make them flow into arid regions and greatly increase agricultural capabilities.

Yet, our administration did not want to interfere with the discussions in Geneva, and told us not to go ahead with these plans. So, we are still waiting.

There are many other possibilities in "Plowshare"—some of them real—which I have mentioned—some of them dreams. If you will attend our discussions, which will start at 2:15, you will hear more about these possibilities.

But if the Russians should indeed develop these methods; and if they should announce the availability of these methods to backward countries which need the minerals . . . which need the water . . . which need the means of transportation which they can open up, they will have accomplished a propaganda advantage which will dwarf Sputnik and an economic lever equal to a hundred Aswan dams.

We have not done that . . . we have not gone ahead and what has held our hand was *fear*.

We are talking about the future, which could be bright. But the future will not exist for us unless we remain strong enough to defend ourselves and to defend the free world. Power today depends on the basically strongest weapon—nuclear explosives. You know that we have been wishing and dreaming that we might turn back the clock—that we might somehow stop the development of nuclear weapons. You know that this wish and this dream today looks a little different after Khrushchev has announced that they can and will test nuclear explosives of 20 megatons or 50 megatons or 100 megatons.

I would like to tell you a few facts relating to nuclear weapons and relating to the nuclear moratorium. I cannot talk about the future with-

out discussing these facts. Because the future depends—our future depends—on our wise behavior.

The first fact relates to the danger of an all-out war. You have heard words and these words said something like this: "Man holds in his mortal hand the power to destroy all forms of human life." Let me tell you a fact. These words were based on a misunderstanding—a misunderstanding that has to be cleared up. An all-out nuclear war—if it ever comes—will be a dreadful thing, but it will *not* destroy all form of human life. *MOST CERTAINLY NOT!*

What man now holds in his hands is far short of what would endanger all human life. If you try to indulge in fantasies about the end of the world, the possibilities are many. The greatest danger probably would arise from somebody really going to work on bacteriological warfare. As far as the known facts of world-wide radioactive fallout is concerned—because that is the danger to which the quoted words refer—we do know tests have produced the fallout. This fallout can be clearly shown at present *not* to be dangerous. But, in case of an all-out war, fallout would be dangerous in certain areas, but *not* throughout the whole world.

In order to endanger everyone on the globe, one would have to explode millions of megatons . . . millions of bombs . . . each one carrying a million ton equivalent. Even then there would be methods for people to escape if they but tried seriously to escape. Humanity certainly will survive an all-out war.

Some organization with enormous efforts, if it had billions of dollars at its command might invent something that would endanger all of us. But, in order to do so it would have to depend not on winning the war, not on defending themselves, not on power, not on conquest . . . these things will not destroy humanity. It can be done only if somebody tries to do just one thing . . . destroy all humanity. People never will try to do it. I think even if they try they will not succeed.

Although an all-out war will not destroy humanity—an all-out war very easily could destroy the United States and could destroy the free world and could destroy the very idea of human dignity. This could happen, because, *scared* by exaggerated dangers we have neglected to defend ourselves. We have not built shelters, we have

not done the things that could save us and that could, by the very fact of our defensive strength, insure peace.

Fact Number One—humanity will survive, but we shall survive only if we defend ourselves.

Fact number two concerns the nuclear test moratorium. After many years of careful discussion every responsible person is now agreed that the Russians could have tested all along during the last three years without our being able to detect any trace of such tests. Furthermore, everyone is agreed that tests up to reasonably great sizes could continue into the indefinite future *secretly*, even if the Russians agreed to all our demands—to all our reasonable proposals; even then they could continue systematically and effectively to cheat on the test ban. This situation will continue into the indefinite future barring a very great and unexpected development in our ability to detect the tests.

Fact Number Three—we know that we stopped nuclear tests almost three years ago. We have nothing but the statement from Russia that they have not tested in the meantime. Today, we are told by the Russians themselves, that they want to test 100 megatons. This sounds like a lot. It's not much bigger than what we had and what we have every reason to know that they have. I think the statement was put out for the simple purpose to frighten us and we have given every indication that we can be *frightened*. What the statement means is, that if the Russians are so confident in saying what more they can achieve, they probably by now have accumulated an enormous amount of knowledge and there is every reason to believe that this knowledge could have been accumulated by their steady testing for the past three years. We doubt our knowledge. *If* this is so, and I don't know whether it is, but if it is so, then by now instead of a missile gap, there exists an atomic gap and we may be on the way of becoming a second-class power.

Now you may have heard that more testing is useless, because we already have so much. The same people who have been telling us that the Hydrogen Bomb is not feasible are now trying to tell us that further development is not important. I can assure you that it is. By further development you can produce a disparity such that a weaker nation when attacked lacks even

the power to strike back and if that situation ever should occur, at that time our freedom would be lost. By further testing one can develop tactical weapons of the greatest possible use in localized countries, which can be kept localized by the old and time-honored method of restricting the area and the aims of the countries. Not by the senseless procedure of trying to restrict the weapons. Because what type of weapons are being used is very hard to be sure about. In an age where the technological development is rapid and where Khrushchev even, 20 months ago, has boasted that he has great surprises in store for us. If there is a great surprise it will be very hard having suffered a defeat in a local area to find out what have you got.

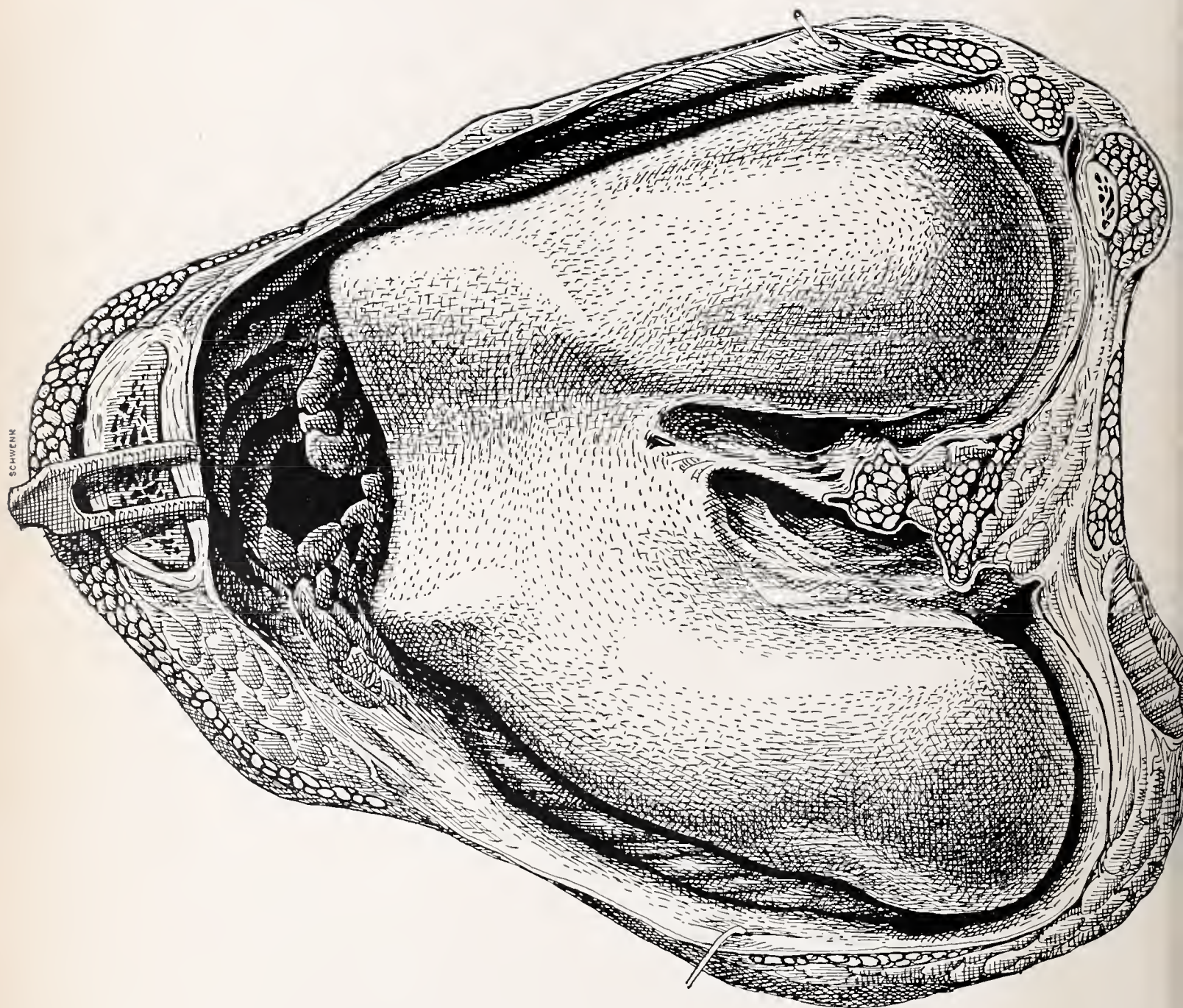
But we do know that nuclear weapons are the most powerful agent. And, we know that if we want to defend our own country, if we want to defend our allies, if we want to be able to respond to *each* aggression with the proper countermeasures on the same scale and nevertheless sufficient to stop aggression if we want to do all that, it is necessary that we be prepared.

Ladies and gentlemen, on the 31st of October, 1958, we stopped the development of our most essential strength. In the meantime, the Russians may have made giant strides. There is no doubt that the hour is late, I cannot tell you how late it is—I don't know. I hope and I believe, that it is not yet too late if we act *now* and if we act with determination and if we do no more than acquire more knowledge.

If the Russians want to test a 100 megaton in the atmosphere, this will add to the fallout throughout the world. This additional fallout, like the past fallout will *not* be dangerous. But we do not need to make such big tests, because *real* progress does not consist in a big bang. Real progress consists in added knowledge and we have been negligent in developing this added knowledge of our nuclear explosives for defense and for peaceful purposes to increase the wealth of the world.

If we are willing to do the obvious . . . to resume testing on a reasonable scale, without much fanfare, but doing the essential things with care and with diligence, I feel sure that freedom will survive.

Thank you very much.



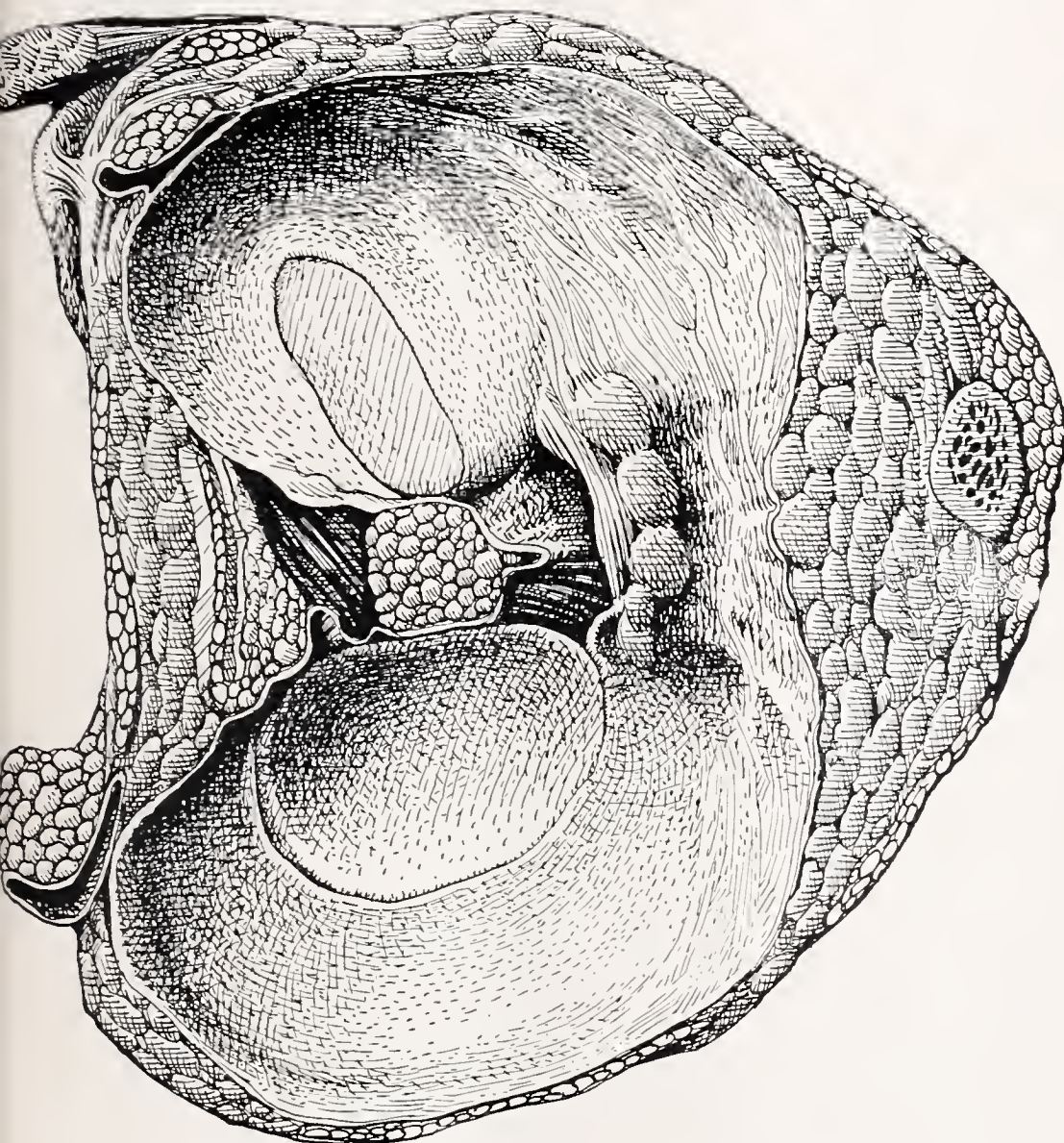
because patients are more than arthritic joints...
controlling inflammatory symptoms is frequently not enough!

Even cortisone, with its severe hormonal reactions, can effectively control inflammatory and rheumatoid symptoms. But a patient is more than the sum of his parts — and the joint is only part of a whole patient. Symptomatic control is but one aspect of modern corticotherapy, because what is good for the symptom may also be bad for the patient.

*Unsurpassed "General Purpose" and "Special Purpose" Corticosteroid...
Outstanding for Short- and Long-term Therapy*

Aristocort[®]

Triamcinolone Lederle



(Knee Joint, Left: distal end of femur; Right: proximal end of tibia)

ARISTOCORT is an outstanding "special purpose" steroid when the complicating problem is increased appetite and weight gain, sodium retention and edema, cardiac disease, hypertension or emotional disturbance and insomnia.

ARISTOCORT provides unsurpassed anti-inflammatory control without sodium retention or edema — without the undesirable psychic stimulation and voracious appetite.

Supplied: Scored tablets (three strengths), syrup, parenteral and various topical forms. Request complete information on indications, dosage, precautions and contraindications from your Lederle representative, or write to Medical Advisory Department.

Lederle LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY • Pearl River, New York

WHAT'S NEW?



CLINICAL AUDIOLOGY . . . A NEW SCIENCE

H. A. Ted Bailey, Jr., M.D.* and

Frederick N. Martin, M.A.**

AT THE CLOSE OF WORLD WAR II, problems concerning evaluation and rehabilitation of veterans with service connected hearing impairment created a need for the development of a new paramedical profession. Out of this need grew the science of hearing known today as Audiology.

If the audiologist were to render a professional service, it was obvious that his education must be on a professional rather than a technical level. Today the official body of audiology known as The American Speech and Hearing Association has set down standards of clinical competence which many colleges and graduate schools are able to meet. The audiologist's required education and training in the modern techniques of audiometric examination and his exposure to the fields of clinical psychology, acoustics, and electronics made his services to the otologist in the diagnosis of auditory disorders extremely valuable.

For many years the pure tone audiometer was the only quantitative means of measuring hearing function. This instrument is still an invaluable tool in the clinician's armamentarium and experience in its use has revealed many interesting clues to auditory pathology. The pure tone

audiometer not only presents a precise measurement of the patient's hearing acuity for tones by air and bone conduction, but also demonstrates a variety of audiometric configurations which are frequently of diagnostic significance.

Though a great deal of information is gained through the use of pure tone audiometers, it was apparent that the additional measurement of a patient's ability to hear and understand speech was greatly needed. This led directly to the development of the modern speech audiometer, an instrument which makes it possible to measure the patient's minimal threshold for hearing speech, and his ability to discriminate the sounds of speech which are presented to him at a comfortable loudness level.

With the speech and pure tone audiometers, it is now possible, in most cases, to accurately determine which patients are candidates for surgical correction of their hearing loss as well as to test the post-operative results. These tests also assist in the diagnosis of such medical conditions as Meniere's disease, noise induced loss, presbycusis (loss caused by age), acoustic neuroma, and central auditory disorders.

On the basis of the above described tests it is usually also possible to determine which patients can most likely derive sufficient help from a hearing aid to justify its use. Those patients who

*Head, Division of Otolaryngology, Department of Surgery, University of Arkansas School of Medicine.

**Director, Audiology Department, Bailey Ear Clinic, 1610 West Third Street, Little Rock, Arkansas.

appear likely to receive benefit are then tested with various makes and models of hearing aids in a special testing chamber in order to find an acceptable instrument in terms of speech reception threshold, discrimination tests in quiet and in the presence of background noise and tolerance for loud sounds.

Upon completion of these tests, which constitute a hearing aid evaluation, recommendations are made based on objective hearing tests, patient's subjective responses, psychological, social and vocational needs, and medical considerations. The patient is counseled regarding these findings, and if a hearing aid is indicated, the recommended aid is purchased from a local authorized hearing aid dealer. The patient is carefully reminded of the type and amount of benefit which he may hope to achieve from his hearing aid, which helps to prepare him for the problems inherent in the use of a hearing aid, and also helps him to be better satisfied with the benefit he does receive. With the introduction of such new equipment as the psychogalvanometer (an instrument which measures acuity for sound based on a conditioned electrodermal reflex), it is now possible in many cases to test the hearing of young children or others who either cannot or will not cooperate fully on voluntary audiometric examinations. Through such instrumentation we have gained great insight into the problems of non-

organic hearing loss (malingering and psychogenesis).

With the development of new surgical techniques and the subsequent increased interest on the part of the physician in the handicap of hearing, new audiometric techniques have evolved and continue to be developed which not only tell whether the patient has a conductive or sensorineural (nerve type) loss of hearing or a composite of the two (mixed) but also give good indications of the site of the lesion itself (i.e. middle ear, cochlea, eighth nerve, brain stem, or temporal cortex). This information may be extremely important to the physician in making his diagnosis.

The function of the audiologist does not end with his part in the diagnosis of the hearing impairment, especially in cases where the disorder does not lend itself to surgical or medical correction. It is his function to aid the hearing handicapped patient in his adjustment to his total problem. This is effected by the practice of/or recommendations for auditory retraining, speech reading, speech conservation, and speech and language stimulation, as well as special education for the hearing handicapped child.

In recent years it has become increasingly more apparent that clinical audiology plays an integral part in the practice of otology and for this reason more and more modern ear clinics are appointing professional audiologists as staff members.

TEACHING SEMINAR

*Department of Medicine
University of Arkansas Medical Center
Little Rock, Arkansas*



THE HYDROTHERMAL SHRINKAGE OF COLLAGEN

Joseph T. Wilson, Jr.* and John A. Pierce**

COLLAGEN IS THE MAJOR CONSTITUENT of the connective tissues of the body. As such, it is the most prevalent single organic substance in the animal organism (1). The basic work on collagen has been carried out primarily by leather chemists and by investigators in the fields of gelatin and glue research. It has been the subject of extensive investigation and discussion in recent years by those interested in its changes with aging.

The physical properties of collagen are those of toughness—familiar to everyone. Its high tensile strength is desirable in the production of leather; undesirable in beef steak. It elongates but little on mechanical stress and thus has a high modulus of elasticity. The rate of metabolic turnover of collagen is very slow in comparison with other tissues, giving it a relative permanence in the body. The present report concerns a property of collagen less familiar than those mentioned above, but of at least equal, if not greater, importance. The phenomenon of hydrothermal shrinkage is a molecular event, and its study might well provide an index to changes within the collagen molecule not easily detectable by other means.

It is not the purpose of this paper to discuss in detail the many structural theories which have been proposed for the collagen fiber. It is essential, however, to present the established basic architecture of collagen in order to permit an evaluation of the process of hydrothermal shrinkage. The basic structure is composed of repeating units of some 17 amino acids in peptide linkage, with relatively high proportions of glycine, proline, and hydroxyproline (1, 2). The helical concept of organization of these polypeptide chains was first promulgated by Pauling and Corey in 1951 (3). On the basis of x-ray diffraction studies, electron microscopy, physicochemical analyses and infrared absorption data, the original Pauling and Corey model has been modified extensively, with outstanding contributions by Bear (1), Ramachandran and Kartha (4) and, more recently, Rich and Crick (5), whose Collagen II model is most widely accepted at present. In essence, this model of the collagen protofibril (defined by Bear (1) as "the thinnest filament which carried the essential chemical and configurational structure of collagen") consists of a system of coiled-coils formed by 3 left-handed chains winding in a right-handed direction (clockwise) about a common axis (9).

The protofibrillar units are further organized

*Intern in Medicine, University of Arkansas Medical Center.
**Associate Professor of Medicine, University of Arkansas Medical Center.

into filaments. Whether they are arranged in straight parallel units, or carry out the helical concept at this level, is not generally agreed upon, but there is a great deal of evidence in support of the latter, as summarized by Reed (6). The filaments, in turn, appear to be organized in very steep spirals, forming strands. Two strands then spiral around each other to form the complete fibril, groups of which are associated in straight, parallel fashion to make up the collagen fiber.

The above concept has been referred to as the "homogeneous" concept of collagen structure because it postulates a structure composed of identical units, however complex their organization. It is not accepted in its entirety by such well-known investigators as Banga, Balo, and Szabo, Gross, Jackson, Fessler, Muir and Neuberger (7). Jackson (8) has shown that conditions which are favorable to the extraction of mucopoly-saccharides from calf tendo achilles and rat tail tendon collagen are associated with a striking reduction in stability, as reflected by a decrease in shrinkage temperature. Banga, Balo and Szabo (7) believe the collagen fiber is composed of a soluble procollagen and an insoluble metacollagen, plus 2 mucoproteins.

Among the more sensitive indices of alteration within the collagen molecule is the hydrothermal shrinkage temperature (T_s), defined as the temperature range during which collagen fibers suspended in water are noted to contract most markedly (2), generally to about 1/3 or 1/4 their initial length. For mammalian collagen, T_s has been noted to be in the temperature range of 60° to 70° C (2).

The physico-chemical changes which occur during the hydrothermal denaturation are thought to take place at the protofibrillar level of organization, and have been chiefly ascribed to the rupture of hydrogen bonds between adjacent protofibrils (1, 2). As more and more hydrogen bonds are ruptured, the stability of the extended collagen molecule (protofibril) finally breaks down completely, and the protein tends to assume its most probable configuration, the folded one, causing contraction. Steric factors and side chain variability cause this process to occur in some regions earlier than in others, and it is these regions possessing weaker cross linkages that serve as "shrinkage nuclei" and appear grossly as nodules on the fiber during early con-

traction (2). The two types of hydrogen bonds believed to be most significant are those between the CO and NH groups of adjacent peptide linkages, and those between the OH groups of hydroxyproline moieties and CO groups on an adjacent chain. Other forces operating in the stabilization of the collagen fibril to a much less degree include salt-like linkages between oppositely charged side chains and van der Waal's forces.

According to Banga, Balo and Szabo the protofibrils are normally stabilized in the extended state by a procollagen-mucopolysaccharide complex, which dissolves during hydrothermal denaturation, allowing the fiber to contract.

Age-Related Changes

According to one concept, thermal contraction is really an accelerated aging process, and it has been calculated that contraction would occur at 38° C during the course of a lifetime if the collagen fibers were not replaced (9). The underlying change occurring with aging of collagen, which has been observed by many workers, is an increase in stability. This is reflected in its decreased solubility, loss of swelling properties and elevation of shrinkage temperature (10, 11). This has been ascribed to an increase in the number of cross-linkages in the collagen molecule, accounted for by the so-called *in vivo* tanning effects of such intermediates in metabolism as glyoxal and methyl-glyoxal (9), and by an increase in hydroxyproline content with aging (11, 12), with a concomitant increased formation of hydrogen bonds. The increase in shrinkage temperature of vertebrate collagens with increasing hydroxyproline content is well documented (2, 12) from studies in many different species.

The connective tissues are especially important for the maintenance of normal lung architecture. Total lung collagen and elastin have been measured from individuals of various ages. It was surprising that the collagen in the lung remained constant as age advanced while the elastin content of the lung increased significantly (13). Whether the elastic tissue formed in persons of advanced years is identical with that formed by the growing child is still not entirely clear. It can be said from crude survey techniques that its amino-acid composition is similar in both instances.

Pulmonary emphysema is a disease which re-

sults from the disruption of the lung connective tissue skeleton. It seemed important to measure the lung connective tissues in this disease. There were no differences in whole lung collagen or whole lung elastin between a group of severely emphysematous subjects and a group of age-selected control subjects who had normal lung connective tissue skeletons (14). These studies pointed out the need for much additional information about the connective tissues in the lung. One approach to this problem was the measurement of the hydrothermal shrinkage of the collagen in strips of human pleura.

Studies in this laboratory on 55 strips from 10 subjects failed to demonstrate any age-related changes in the hydrothermal shrinkage of human pleural collagen (15). Orientation of the pleural strips was shown to exert a marked effect on the amount and rate of hydrothermal contraction. Studies with rat tail tendon fibers were consistent with the results described by Gustavson (2) and by Verzar (16). They can be summarized as follows: No change is observed until the temperature approaches approximately 60° C (range 59° to 63° C), when small "swellings" appear at several locations in the fiber. The fiber loses its glistening, pearly-white, opaque appearance, and the cross-striations begin to disappear as it becomes "glassy" and slightly translucent at these locations. This marks the beginning of contraction. As the temperature continues to rise, more and more of these nodules appear, and as the nodules themselves grow they begin to coalesce until the entire fiber is involved when the maximally contracted state is reached.

The maximum rate of shrinkage of the rat tail tendon was noted to occur at temperatures ranging from 63.5° C to 66.2° C. It is of interest that Verzar found heavier weights were necessary to inhibit the shrinkage of fibers from older rats than to inhibit the shrinkage of younger fibers (16). He noted no contraction of fibers from rats under 3-4 months of age. The elastin-like nature of the thermally denatured collagen fibers, as described by Verzar, was also demonstrated, the fibers being quite elastic, "gummy," and translucent at the end of the experiments. On cooling, they relaxed spontaneously to about 90% of their original lengths.

Briscoe, Loring and McClement (11) earlier reported an increase in the hydrothermal shrinkage temperature (T_s) of human lung pleura with

aging. They also found increases in the hydroxyproline content of pleural and lung parenchymal collagen with aging. Briscoe made no statement as to whether an attempt had been made to control the orientation of the pleural strips. If not, it is possible that the increase in T_s reported in their study was not related to the aging process at all but might have resulted from differences in the orientation of the strips.

Theis and associates (17) advocated the use of a static method for the assessment of collagen shrinkage more than ten years ago. More recently, Flory and Spurr (18) demonstrated that measurements of the thermal shrinkage of collagen fulfilled all the thermodynamic considerations to qualify as a first order phase transition. They view collagen as a crystalline material which simply melts at temperatures 60-70° C. Their measurements were performed isometrically permitting the partially melted fiber to come to equilibrium at several different temperatures. The fibers studied were from the rat tail tendon. They had been lightly tanned with quinone. Their study is excellent warranting the review of the interested reader. Their method offers an opportunity to distinguish between tissue inhibitory factors and the melting of the collagen fibrils. It seems logical to suggest that experiments on the hydrothermal shrinkage of collagen need to be repeated with this technique if one is to understand the changes which occur with aging.

BIBLIOGRAPHY

1. Bear, R. S. The structure of collagen fibrils. *Advances in Protein Chemistry* 7:69-160, 1952.
2. Gustavson, K. H. *The Chemistry and Reactivity of Collagen*. Academic Press, Inc., New York, 1956.
3. Pauling, L. and Corey, R. B. The structure of fibrous proteins of the collagen-gelatin group. *Proc. Nat. Acad. Sci., Wash.* 37:272, 1951.
4. Ramachandran, G. N. and Kartha, G. Structure of collagen. *Nature* 176:593-595, 1955.
5. Rich, A. and Crick, F. H. C. The structure of collagen. *Gelatin and Glue Research*. Ed. Stainsby, G. Pergamon Press, Inc., New York, 1958.
6. Reed, R. The architecture of the collagen fibril. *Connective Tissue*. Ed. Tunbridge, R. E. Charles C Thomas, Springfield, 1957.
7. Banga, I. The structure of collagen in the light of various physical, chemical, and biological investigations. *Excerpta Medica XX, Gerontology and Geriatrics*, 2:187-190, 1959.
8. Jackson, D. S. Chondroitin sulphate as a factor in the stability of tendon. *Nature and Structure of Collagen*. Ed. Randall, J. T. Acad. Press, Inc., New York, 1958.
9. Verzar, F. Biological problems in experimental research into the process of aging. *Triangle III* 7:254-263, 1958.

10. Brown, P. C. and Consden, R. Variation with age of shrinkage temperature of human collagen. *Nature* 181:349-350, 1958.
11. Briscoe, A. M., Loring, W. E. and McClement, J. H. Changes in human lung collagen and lipids with age. *Proc. Soc. Exp. Biol. and Med.* 102:71-74, 1959.
12. Rigby, B. J. and Spikes, J. D. Hydroxyproline and the shrinkage temperature of collagen. *Nature* 187:150-151, 1960.
13. Pierce, J. A. and Hocott, J. B. Studies on the collagen and elastin content of the human lung. *J. Clin. Invest.* 39:8-14, 1960.
14. Pierce, John A., Hocott, Joe B., and Ebert, Richard V. The collagen and elastin content of the lung in emphysema. *Ann. Int. Med.* 55:210-222, Aug. 1961.
15. Wilson, Joe T., Jr. Studies of the hydrothermal shrinkage of mammalian collagen. Thesis, University of Arkansas School of Medicine, Little Rock, Arkansas (1961).
16. Veizar, F. The aging of collagen. *Connective Tissue*. Ed. Tunbridge, R. E. Charles C Thomas, Springfield, 1957.
17. Theis, E. R. and Steinhardt, R. G., Jr. Protein axial movement studies. II. Data obtained through use of dynamic and strain gage shrinkage meters. *J. Am. Leather Chem. Assoc.* 45:591-610, 1950.
18. Flory, P. J. and Spurr, O. K., Jr. Melting equilibrium for collagen fibers under stress. *Elasticity in the amorphous state*. *J. Am. Chem. Soc.* 83:1308-1316, Mar., 1961.



ELECTROCARDIOGRAM

OF THE MONTH

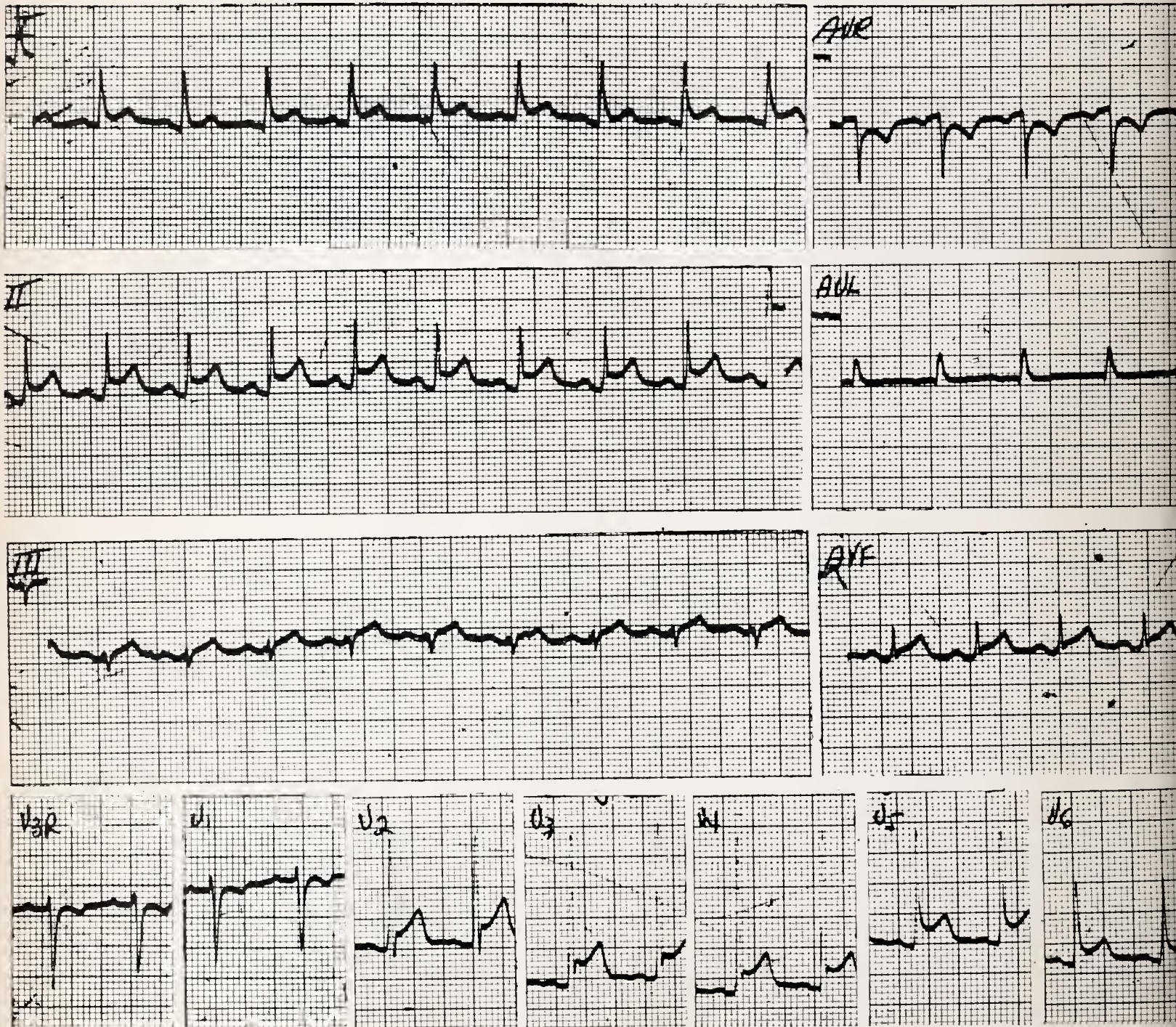
WHAT IS YOUR INTERPRETATION?

AGE: 44 SEX: F BUILD: Slender BLOOD PRESSURE: 80/60/0

MEDICATION: Digitalis (Digoxin)

HISTORY: Chest pain, precordial, possible pericardial friction rub. History of previous atrial fibrillation, systemic L.E.

Answer on Page 507

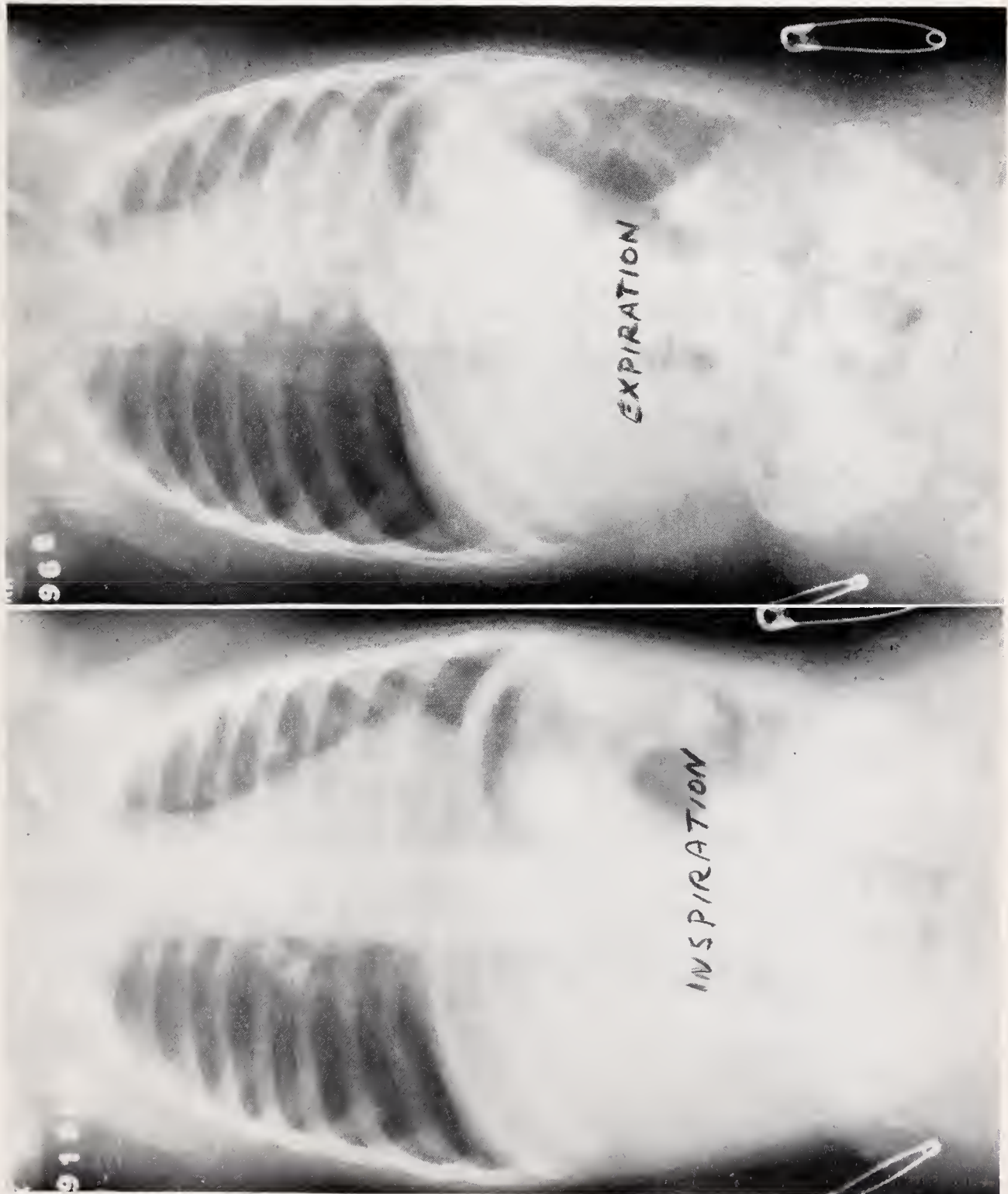


Prepared by J. S. Taylor, M.D., Professor of Medicine
The Department of Medicine University of Arkansas Medical Center

WHAT IS YOUR DIAGNOSIS?

Prepared by the
Department of Radiology, University of Arkansas
School of Medicine, Little Rock

ANSWER ON PAGE 506





PUBLIC HEALTH AT A GLANCE

Medical Self-Help Training Plans for Arkansas

A workshop for physicians and nurses, and the medical auxiliary, will be held at Mather Lodge, Petit Jean State Park, June 15-17, and workshops for lay leaders from June 10-15 and June 17-22 will train these leaders to, in turn, conduct and train other instructors for teaching "Medical Self-Help Training" courses to as many Arkansans as possible.

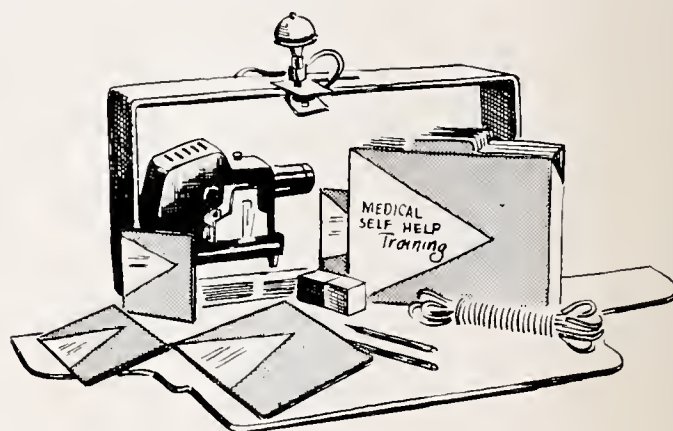
Medical Self-Help Training is the public education phase of the plan for National Emergency Medical Care developed by the American Medical Association, and the Division of Health Mobilization, of the U. S. Public Health Service. In a time of national disaster, families may be without medical help for weeks or longer, either due to isolation, or because of patient demand so overwhelming that physicians would be unable to care for all the sick and wounded. Furthermore, they may be faced with situations of makeshift sanitation and the necessity for decontamination procedures with which they are probably not now familiar.

Somewhat similar situations may occur for shorter periods, in which medical care may not be available in cases of natural disaster, or even when camping or hunting, when illness or accidents may occur.

The Medical Self-Help Training Program seeks to provide the knowledge and teach the skills whereby families will be able to take care of their own health needs if necessary in a national emergency, and/or in peace-time disaster situations. The program stresses that such self-care is *not* a substitute for good medical care provided by a physician. In fact the course undoubtedly

gives the students a better appreciation of their physician's knowledge and skill.

To implement this program a teaching kit has been developed for a course of 12 lessons to be given in 16 hours (8 two-hour sessions or as arranged). It contains a small projector and screen, filmstrips in color, instructor's guide and texts, student's handbooks, and testing materials. Lectures cover radio active fallout and shelter; hygiene, sanitation and vermin control; water and



food; shock; bleeding and bandaging; artificial respiration; fractures and splinting; transportation of the injured; burns; nursing care of the sick and injured; infant and child care; and emergency childbirth. Each course is to be given under the supervision of a physician, but the lectures are written out, to be read without change, so that lay persons will ordinarily do the actual presentations. Thirty of these kits are available for Arkansas.

In November, 1961, Dr. J. T. Herron and Dr. Harvie Ellis from the State Board of Health, and Dr. M. D. McClain, representing the Ar-

kansas Medical Society, attended a workshop on the program. Since then, thru March 15, six courses have been given for State Health and Education Department personnel, one at the Little Rock City Health Department, for representatives of various public and private health agencies, and one at the headquarters building of the Pulaski County Medical Society for the Women's Auxiliary. These eight courses have reached 260 people, many of whom have participated in teaching subsequent courses.

The Petit Jean workshops from June 10-15 and June 17-22 will each include the standard course, given to the participants in small groups with ample opportunity for practicing the demonstrations. As much background material as time permits will also be given, and group discussions on how best to recruit students for courses locally, and to train instructors.

The week-end workshop for physicians and nurses will consist chiefly of discussions by participants on how best to encourage, direct and supervise the courses. The results of these discussions should prove invaluable to the State Steering Committee in their task of trying to reach every adult in Arkansas with "Medical Self-Help Training".

This committee includes Dr. M. D. McClain and Dr. Guy R. Farris, Jr., representing the State Medical Society and two representatives each of the State Department of Education, State Office of Civil Defense and the State Board of Health.

RESOLUTIONS



BE IT RESOLVED that the members of the Pulaski County Medical Society pause with respect and express themselves on the recent loss of Doctor Charles R. Chesnutt.

Dr. Chesnutt was an esteemed member of our Society for many years. He was both able and kind and will long be remembered by all of us.

As a mark of respect and in appreciation of his accomplishments as a physician, this Society has made a contribution to the Student Loan Fund at the University of Arkansas Medical Center.

BE IT FURTHER RESOLVED that a copy of this resolution be sent to his wife, a copy be furnished to the Secretary of the State Medical Society and that the resolution be spread on the minutes.

By Action of the Memorials Committee
Pulaski County Medical Society
Carl Wenger, M.D., Secretary

Whereas, The physicians of Ouachita County Medical Society believe that doctors of medicine are best qualified of all people to render opinions on medical care for the people; and

Whereas, we know that the free enterprise system of private medical care, although not perfect, is the finest system yet devised for producing an optimum of freedom for the patient, a maximum of good work from the physician, both at the lowest possible overall cost to the citizens of our country; and

Whereas, we are certain that if enacted into law and implemented, the King-Anderson Bill, H.R. 4222, will eventually lower the general quality of health care in our nation while increasing tremendously the cost of this care; now therefore be it

RESOLVED, that the members of the Ouachita County Medical Society will actively support and work for all scientific and health progress in medicine and any legislation which would improve the quality of medical care of the citizens of these United States; and be it further

RESOLVED, that because we believe the King-Anderson Bill is unwise and detrimental medical legislation *we will not participate in or implement in any way this or other similar government medical programs* WHICH, IN OUR OPINION, will cause deterioration of the general medical care in our country. Although we will refuse to participate in such government programs, we will continue to render the finest possible care to all our patients regardless of their ability to pay; and be it further

RESOLVED, that each program or plan that proposes to further the progress of health care in our nation will be studied; and after careful deliberation we will try to decide whether or not it helps solve the problem and will give the people of our country the finest possible medical care.



EDITORIAL

METHODS OF EXAMINING THE ESOPHAGUS

Alfred Kahn, Jr., M.D.

ADEQUATE EXAMINATION OF THE esophagus is most important now that surgery is able to attack esophageal lesions. Many forms of treatment are adequately handled by medical means if properly diagnosed.

Recently, an excellent symposium on clinical methods for examining the esophagus was published in *Gastro-Enterology* (Vol. 35, p. 92, July 1958). Some of the material in this review is summarized here.

Several questions pertaining to history were discussed. It was brought out that difficulty in swallowing liquids is seen with muscular dysfunction but in malignancy there is first difficulty in swallowing solids. Hoarseness suggests neoplasm. The presence of pulmonary disease suggests cardiospasm not malignancy.

Esophagoscopy is indicated in: doubtful x-ray examinations and where a biopsy is needed. Esophageal perforation is the worst complication but general anesthesia and use of dilators can obviate this in the most difficult cases. There are several types of esophagoscopies: rigid and flexible. The rigid variety is a hollow tube put down under direct vision; the flexible type is inserted blindly like a flexible gastroscope and then the examination is made. All should be aware that local anesthetics are very toxic to some patients; fatalities may result. Balloon distention of the esophagus simulates anginal pain but is not con-

sidered a reliable means of differentiating angina pectoris from esophageal dysfunction.

A very helpful method of detecting malignant esophageal lesions is the study of exfoliative cells. Studies are cited in which 51 of 54 esophageal cancers were diagnosed. The pitfalls of this method have been well documented in the studies of uterine cancer detection.

X-ray studies of the esophagus are of great clinical value. A thick barium mixture is essential; further detail can be obtained by one teaspoonful of an equal mixture of powdered tartaric acid and sodium bicarbonate. This is washed down with barium and the resultant gas helps visualize esophageal lesions. Also recommended is performance of the Valsalva maneuver with barium in the esophagus; this will help demonstrate esophageal varices.

Not to be overlooked in any discussion of esophageal disease is the necessity of performing a biopsy. Care must be taken to avoid biting too deeply or perforation may result.

For satisfactory esophageal diagnoses appropriate laboratory studies are usually needed. However, the many methods of examining the esophagus should not overshadow a good history and physical examination—they may obviate the need of extensive and often uncomfortable endoscopic studies.

MEDICINE IN THE



Guidance Clinic for Children Advances

Proponents of a child guidance clinic for Pulaski County have been doing more than just talking, apparently. Persons attending a meeting of the Pulaski County Mental Health Association seemed a little surprised that partial financing has already been arranged for, a place to house the center has been selected and there are 5,000 children, at least, in Pulaski County, who need the services of such a clinic.

At present, there is one child guidance clinic in Arkansas. It is at the University Medical Center, and is a limited operation because it is basically designed for training future physicians.

Rosewood Center Opening June 1st

Officers of the executive committee of the medical staff which will serve the new \$1 million Rosewood Convalescent Nursing Center at Hot Springs. Dr. Euclid Smith was elected chief of the Center's medical staff; Dr. Driver Rowland, vice chief of staff; Dr. George Coffey, secretary and Dr. William A. Woodcock, Dr. Stuart McConkie, Dr. Ralph Patterson, and Dr. Brank Burton, other members of the executive committee. M. B. Shroyer of Memphis is the executive vice president of the Center and Stephan A. Diury will be the administrator.

New Field of Neurosurgery Saves Many With Brain Injury

The Southern Neurological Society met at the University of Arkansas Medical Center at the invitation of Dr. Robert Watson, their president. The concern of the neurosurgeon, Dr. Watson explained, is with injury to and disease of the nervous system—the brain, spinal cord and peripheral nerves. Neurosurgery is tedious, exacting, demanding and time consuming. Ordinarily a brain operation takes three to five hours. Dr. Watson

said that the surgeon "must work carefully, but not too slowly for the safety of the patient." The doctors discussed such things as advances in the treatment of head injuries and research findings on X-ray studies of cranial circulation. Speakers included specialists from Johns-Hopkins Medical School at Baltimore, Duke University at Durham, N.D., Baylor Medical Center, the University of Mississippi and the Arkansas Medical Center.

Physicians Broke Ground in Little Rock

Fifty doctors and dentists broke ground in a mammoth endeavor—a \$1.5 million medical building on University Avenue in Little Rock. The medical men and dentists have incorporated as the Little Rock Land Company. They have awarded an earth-moving contract to the Pickney Price Construction Company of Little Rock and work has begun.

The general construction contract will be awarded this month, and the building will be completed by the end of 1963. It will be eight stories tall and will house the offices of about 60 doctors and dentists and auxiliary firms such as a drug store and surgical supply store.

The upper six floors will house the doctors' offices. On an arcade level will be a drive-in bank, an X-ray supply shop, a beauty parlor, surgical supply shop and barber shop. On the ground floor will be a drug store and a radiological suite with a cobalt unit.

A parking lot with a capacity of 300 cars will surround the building. A lower parking area will accommodate 150 cars of doctors and technicians.

Dr. Barney P. Briggs is president of the company and Dr. Briggs presided at the groundbreaking ceremonies.

Role of Chromosomes Examined at Medical Center

Dr. Lytt I. Gardner, an instructor at State University of New York in Syracuse, was one of four guest lecturers who took part in the special post-graduate sessions at the University of Arkansas Medical Center. The post-graduate sessions were on special problems in pediatrics.

One of two topics offered by Dr. Gardner was "Chromosomes and Pediatric Disease."

The appointment of Dr. John E. Whitney as head of the Department of Physiology at the University of Arkansas Medical Center was announced by Dr. Winston K. Shorey, Dean of the School of Medicine.

Dr. Whitney, who has been at the Medical Center since 1956, will assume the title of professor and head of the department. He has been serving as associate professor and acting head.

The new department head studied physiology at the University of California at Berkeley, where he received his bachelor's degree in 1947, his master's degree in 1948 and his Ph.D. in 1951. He also holds a Ph.D. in biochemistry from Cambridge University in England, which he received in 1956.

He started as assistant professor of physiology at Arkansas in 1956. Prior to that he served as a fellow of the American Cancer Society at Cambridge, from 1954-56; as a fellow and research associate at the University of California at Los Angeles, from 1952-54, and as a research associate at Cedars of Lebanon Hospital in Los Angeles, 1951-52.

The Surgeon General of the U. S. Public Health Service, with the concurrence of the Board of Regents of the National Library of Medicine, has approved a transfer of the medical motion picture archives to the Audiovisual Facility of the Service's Communicable Disease Center in Atlanta.

The move is in keeping with the changing and expanding roles of both the Audiovisual Facility at CDC and the National Library of Medicine. The recently dedicated building of the Library in Bethesda, Maryland, will comprehensively serve medical needs through the printed word. The Audiovisual Facility in Atlanta has become a National resource for the development, production, distribution, and utilization of audiovisual materials supporting health and medical ob-

jectives. Already, extensive film cataloging, formerly accomplished at the National Library of Medicine, has become a responsibility of the Communicable Disease Center's audiovisual program.

In commenting on the transfer of function, Dr. James Lieberman, chief of the Atlanta audiovisual facility, said that the archives are a collection of films in medicine and health-related sciences organized and indexed to serve the needs of the medical community. "To serve effectively, the archives must be comprehensive and readily available for screening at the building in which they are housed," Dr. Lieberman said.

Arkansas College Introduces Medical Course

The first in a series of educational courses for medical assistants under the supervision of the University of Arkansas, Division of General Extension was at Arkansas College. The Arkansas State Medical Assistants and the Arkansas Medical Society have organized the education program. The first course was Medical Terminology. Courses are open to persons who are presently employed as medical secretaries or medical assistants and to persons who may have a desire to become a medical secretary or assistant.

A small certificate is awarded for each course completed in each category and a large certificate with the University of Arkansas seal to those who finish all courses.

Arkansas Doctors Honored in Washington

The Washington medical profession and members of Congress honored two Arkansas doctors for their pioneer work in treating arthritis. Dr. Dana Street, dean of orthopedics at the University Medical School, and Dr. Euclid M. Smith of Hot Springs presented a series of films based on their treatment procedures. They were joined by Bruce Cameron of Baylor University in the film presentation. The films showed treatment of arthritis, wound healing and osteomyelitis. This was the first time these films were viewed in the Washington area.

Attending the reception were doctors from the National Institute of Health, Public Health Service, Bethesda Naval Medical Center and Walter Reed Army Medical Center. Members of Congress and doctors from the Washington area were also present.

CURRENT TRENDS IN CARRIER CHOICES AMONG MEDICAL GRADUATES*

Concern over the number of physicians available for meeting the needs of the nation regarding health care has properly led to questions concerning the distribution of individuals making various types of career choices in medicine. Are there fewer students intending to undertake family practice in medicine than there were ten years ago? If there are more specialists, what portion of those choosing specialty practice will be available to provide a general type of medical care within the frame of reference of a specialty such as internal medicine?

Figure 1 below presents some trend data derived from a variety of sources on the proportions of medical graduating classes in selected years during the past decade electing to enter specific types of medical practice.

From 1950 to 1961 there has been a net increase

*Submitted by the Division of Operational Studies of the AAMC.

of 15% of students desiring to enter specialty practice and a corresponding 15% decrease in the number of students wishing to enter upon careers of teaching or research has essentially remained steady at 4% except during the generally atypical year 1959. The atypicality of the 1959 class may be due to the more extensive sample—72%.

Given the fact that 78% of the 1961-62 group of interns expect to enter specialty practice, it is worthwhile to assess what proportions of these individuals elect particular specialty fields. These data are portrayed in Figure 2.

Roughly one-half of those entering specialties expect to practice one or the other of the two major specialties—internal medicine or surgery—with about one-third of the group desiring to enter obstetrics-gynecology, pediatrics or psychiatry. The minor specialties account for the remaining approximate 20%. Almost one-fourth of the

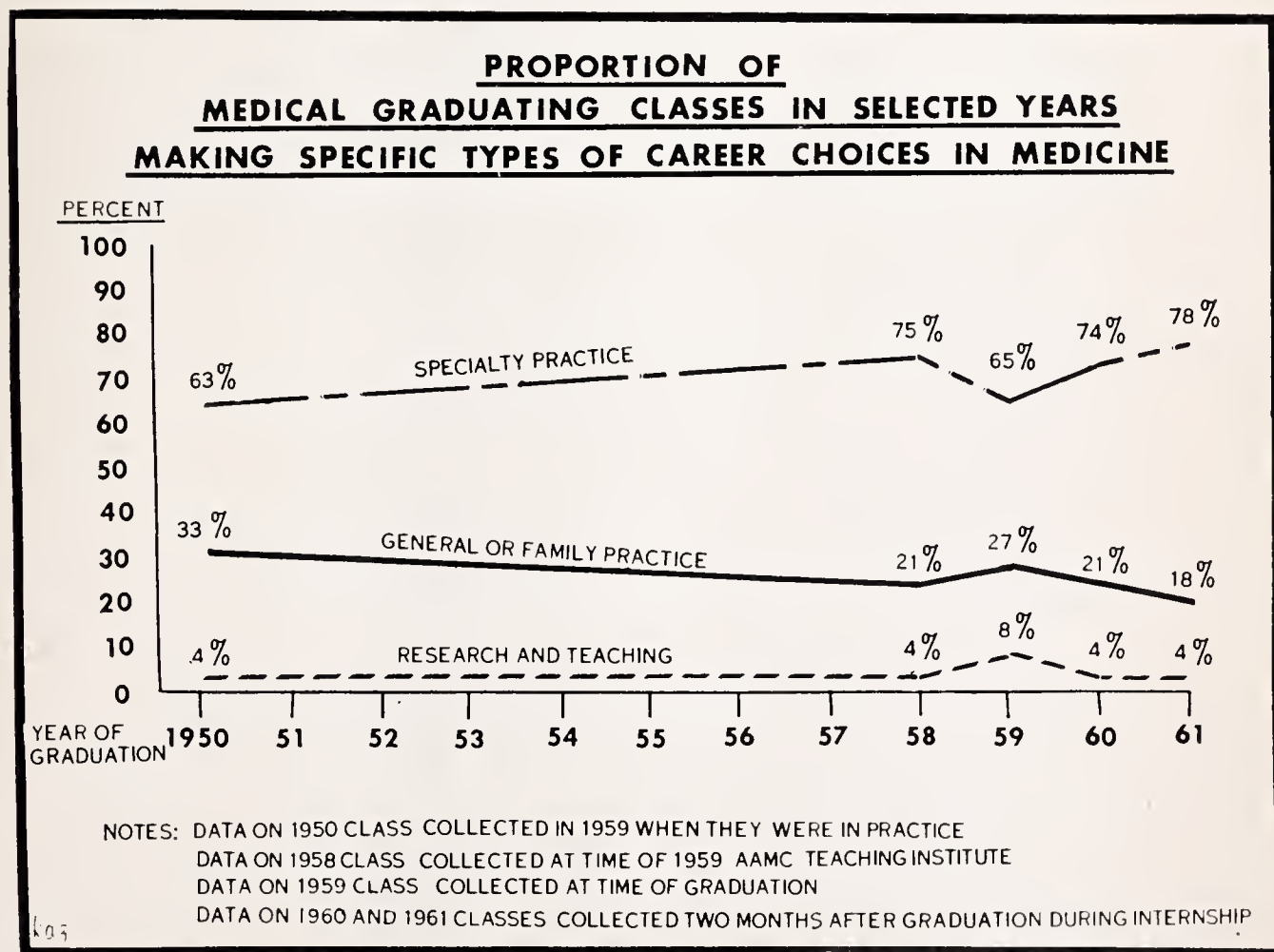


FIGURE 1.

group plan to enter internal medicine which, given current trends of medical care, provides a reservoir of specialists many of whom will devote

their time to family practice but will do so within the context of additional specialty training and skills.

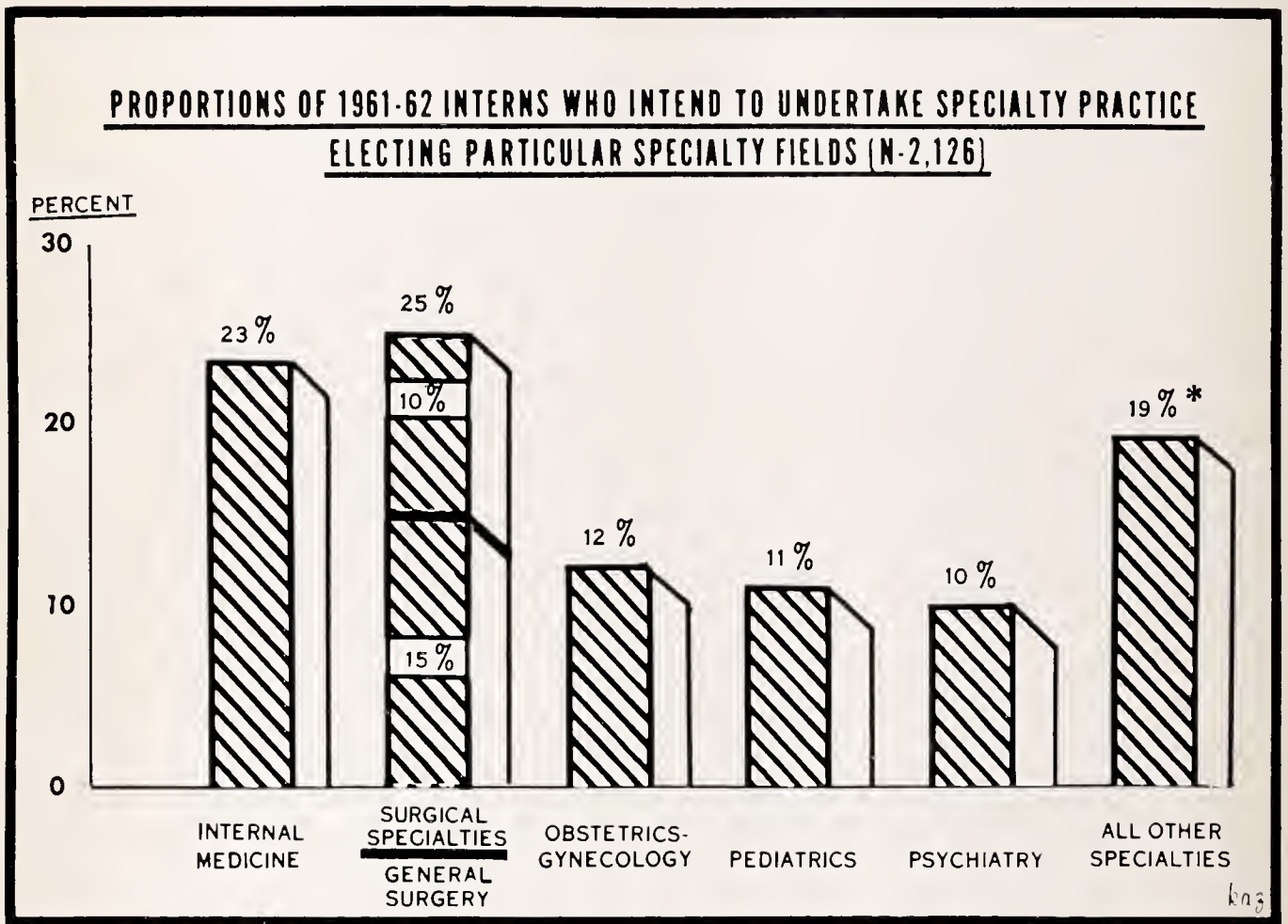


FIGURE 2.

*Includes: Radiology, 4%; Ophthalmology and Otolaryngology, 4%; Pathology, 3%; Anesthesiology, 2%; Dermatology, Physical Medicine, Public Health, Preventive Medicine and Rehabilitation, 6%.

THE MONTH IN WASHINGTON

The American Medical Association said that President Kennedy misstated the real issue when he renewed his request to Congress for legislation that would provide limited health care for the aged under social security.

"We believe the American people are entitled to know that the real issue is not medical care versus no medical care for the elderly," Dr. Leonard W. Larson, president of the A.M.A. said.

"The real issue is: should wage-earners and employers be forced to pay a substantial increase in taxes to provide medical care for millions financially able to take care of themselves?

"No one supporting this proposal has yet pre-

sented any evidence that such radical legislation is needed.

"The medical profession is for the Kerr-Mills law to help the aged who need help. We are for voluntary enterprise, including health insurance and prepayment plans for the non-needy aged."

Dr. Larson also disputed other statements on the issue which President Kennedy made in a new health message to Congress. Dr. Larson said that contrary to what Mr. Kennedy said, the Administration legislation (the King-Anderson bill) could interfere with the patient's freedom of choice of hospital and physician.

It would give the federal government "such broad power to control the practice of medicine

in the nation's hospitals that the Secretary of Health, Education and Welfare would literally become the czar of American medicine," Dr. Larson said.

Dr. Larson also pointed out that it would not be a health insurance program as President Kennedy said. Instead, it was "political medicine," Dr. Larson said.

"As the Supreme Court of the United States has ruled, Social Security is strictly a tax program with current taxes used principally to provide benefits for those now retired," Dr. Larson said.

President Kennedy's new health message was a summation of various Administration proposals in the field with some additions. It included:

- Federal aid for construction of medical schools and scholarships for medical students.

- Expanded health research, including a new institute for child health and human development.

- More funds for the National Institute of Mental Research.

- Federal loans to help set up group practice clinics.

- Encouragement of states to provide medical services for migrant workers.

- Federal research and grants to help combat air pollution in cities.

- A three-year program of federal assistance to get American children vaccinated against polio, diphtheria, whooping cough and tetanus. The government would pay the cost of vaccines for all children under five, provided state and local communities set up inoculation programs.

- Establishment of a National Environmental Health Center "to provide a focal point for nationwide activities in the control of air pollution, water pollution, radiation hazards, and occupational hazards."

* * *

A broad investigation of cold remedies to determine whether their advertising overstates their effectiveness has been started by the Federal Trade Commission.

As a start, the Commission sent questionnaires to 24 major manufacturers of cold remedies. Answers to the questionnaires are mandatory under the Federal Trade Commission Act. When and how many additional manufacturers will receive

similar questionnaires has not yet been determined.

The answers to the questionnaires will enable the Commission to make a comprehensive review of problems throughout the entire field and will assist in evaluating scientific evidence claimed for the medicinal preparations.

The survey seeks information on all such preparations offered for the relief or treatment of congestion, irritation, inflammation, infection, allergy or other conditions involving any part of (1) head, including the accessory nasal sinuses, (2) throat, (3) bronchitis, (4) chest, or other portions of the respiratory system. The questionnaires also seek information on claims for the relief or treatment of any symptom or manifestation of these ailments.

The Commission's resolution stated that it had reason to believe that certain corporations in offering such products to the public "may have falsely advertised and misrepresented" their efficacy. The resolution added that the public interest required that an investigation be conducted to determine whether such advertising was in violation of the Federal Trade Commission Act.

The names of the 24 manufacturers to whom the questionnaires were sent will not be disclosed, an FTC spokesman said.

Doctors Have Seminar at Camden

The Arkansas Academy of General Practice held a regional post-graduate seminar in Camden. Speakers for the seminar were Betty Lowe, M.D., a pediatrician from Texarkana and Franklin Harberg, M.D. Clinical Instructor in the Department of Surgery at Baylor University Medical School.

Dr. Levine Addresses Doctors in Little Rock

"The Physiologic Basis and Clinical Applications of Inhalation Therapy" was the subject of a talk by Dr. Edwin R. Levine at the meeting of the Pulaski County Medical Society at the Coachman's Inn. Dr. Levine, assistant professor of clinical medicine at Chicago Medical School and director of inhalation therapy at Edgewater Hospital in Chicago, was the principal speaker at the Inhalation Therapy Institute at the University of Arkansas Medical Center. He is the author of a textbook on Inhalation Therapy and of the film "Hypoxia—Indications for Oxygen Therapy."

THINGS TO COME

Chest Physicians Plan Five Postgraduate Courses in 1962

The Council on Postgraduate Medical Education of the American College of Chest Physicians, under the Chairmanship of Dr. J. Winthrop Peabody, Sr., Washington, D.C., has planned five postgraduate courses to be held in New York, Philadelphia, Chicago, and Detroit during 1962. The courses are listed below:

CARDIOPULMONARY PROBLEMS IN CHILDREN—Chicago, July 23-27, Edgewater Beach Hotel

RECENT ADVANCES IN THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE HEART AND LUNGS—Philadelphia, September 17-21, Warwick Hotel

CLINICAL CARDIOPULMONARY PHYSIOLOGY—Chicago, October 22-26, Knickerbocker Hotel

RECENT ADVANCES IN THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE HEART AND LUNGS—New York, November 12-16, Barbizon-Plaza Hotel

***OCCUPATIONAL DISEASES OF THE HEART AND LUNGS**—Detroit, December 3-7, Statler-Hilton Hotel

*Revised dates and hotel for Detroit course.

Tuition for each course is \$75.00 to members of the American College of Chest Physicians and \$100.00 to non-members.

Applications for the 1962 postgraduate courses are being accepted in the order received and should be submitted as early as possible. Additional information may be obtained by writing to Mr. Murray Kornfeld, Executive Director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

Wanted: Reprints on Endocrinology and Stress

The research library of the Institute of Experimental Medicine and Surgery of the University of Montreal has suffered extensive losses owing to destruction by fire.

In attempting to rebuild the library, the Institute of Experimental Medicine and Surgery would like to enlist the assistance of the readers of the Journal of the Arkansas Medical Society in sending them all available reprints of their work, especially those dealing with **ENDOCRINOLOGY** and **STRESS**.

At the same time of the fire, their permanent mailing list was destroyed, therefore they will be able to send reprints of their own publications only to those who write for them.

For more information concerning this request please write:

Hans Selye, Professor and Director
Institute of Experimental Medicine
and Surgery, University of Montreal
P.O. Box 6128, Montreal 26, Canada.

Medical Self-Help Training Workshop for Arkansas

A workshop for physicians and nurses, and the medical auxiliary will be held at Mather Lodge, Petit Jean State Park, June 15-17, and workshops for lay leaders from June 10-15 and June 17-22 will train these leaders to conduct and train other instructors for teaching "Medical Self-Help Training" courses to as many Arkansans as possible.

The five-day workshop (June 10-15) will begin with the evening meal Sunday and will close at noon the following Friday. The cost for this five-day course for lay people will be \$36.05, (for two in one room—also includes room and board). The week-end workshop (June 15-17) will begin with the evening meal Friday night and will close at noon Sunday. The cost for this week-end workshop is about \$15.00.

Additional information as to obtaining reservations, programs, and etc. may be obtained through the State Board of Health, Little Rock, Arkansas.

All interested people are cordially invited to attend these workshops.

15th Koppa Conference to Be Held in Texas

Fifteenth Koppa Conference on Pulmonary Diseases, September 6-9, 1962, Camp Waldemar, Hunt, Texas. Wayne E. Reser, M.D., 1504 8th Street, Wichita Falls, Texas, Invitation Chairman. All interested in attending please write Dr. Reser. Everyone is welcome.

Annual Otolaryngologic Assembly to Be Held in Chicago

The annual Otolaryngologic Assembly is to be held in Chicago on October 20 through 26, 1962. The University of Illinois College of Medicine Department of Otolaryngology will offer an intensive postgraduate basic and clinical program under the direction of Doctor Emanuel M. Skolnik. This Assembly for practicing otolaryngologists offers a condensed program of one week of daytime and evening sessions. It is designed to bring to specialists a wide variety of current advances in management, therapy and philosophies. Review of basic morphologic features under the direction of Doctor Maurice F. Snitman and Doctor Frederic J. Pollock is also included, and will feature laboratory demonstrations and prosecution, all augmented by visual aids.

Panel sessions have been designed to bring out special features of otologic and reconstructive surgery and tumors of the head and neck. Luncheon chats are an important part of the daily instructional program.

Interested physicians should direct communications to the Department of Otolaryngology, University of Illinois College of Medicine, 1853 West Polk Street, Chicago 12, Illinois.

Come to the Fair

The Physicians in Washington State are cordially extending an invitation to doctors throughout the country who plan to visit the Seattle World's Fair this September to coincide their trip with the 73rd Annual W.S.M.A. Meeting in Spokane, September 16-19, 1962. Three full days of scientific programs are scheduled with medical television, specialty sessions and general sessions. The Scientific Program of the Washington State Medical Association's Annual Meeting includes the following nationally-known guest scientific speakers:

William R. Lovelace, II, M.D., Albuquerque, New Mexico—*Space Medicine*

John H. Isaacs, M.D., Chicago, Illinois—*Ob.-Gyn.*

Romney H. Lowry, M.D., Seattle, Washington—*Bioastronautics*

Walter L. Herrmann, M.D., Seattle, Washington—*Ob.-Gyn.*

Sidney Farber, M.D., Boston, Massachusetts—*Cancer*

C. Walton Lillehei, M.D., Minneapolis, Minnesota—*Surgery*

Francis J. Braceland, M.D., Hartford, Conn.—*Psychiatry*

Louis J. Girard, M.D., Houston, Texas—*Eye*

Robert A. Aldrich, M.D., Seattle, Washington—*Pediatrics*

Belding H. Scribner, M.D., Seattle, Washington—*Internal Medicine*

William B. Castle, M.D., Boston, Mass.—*Internal Medicine*

Francis C. Lowell, M.D., Boston, Mass.—*Internal Medicine*

David D. DeWeese, M.D., Portland, Oregon—*E.N.T.*

Charles R. Sullivan, M.D., Rochester, Minnesota—*Orthopedics*

Edward S. Judd, M.D., Rochester, Minn.—*Surgery.*

For additional information on this outstanding state program and hotel reservations in Spokane and Seattle, contact the Washington State Medical Association, 1309 Seventh Avenue, Seattle, Washington.

The dates of the Seattle World's Fair are April 21 to October 21, 1962, and information is available from the Washington State Medical Association on all scientific meeting scheduled in the state during that time. For hotel reservations in Seattle during the Fair, contact Expo Lodging Service, Seattle World's Fair, Seattle 9, Washington.



OBITUARY

Retired Doctor Passes Away

DR. EDWARD KULTGEN, longtime Elaine physician, passed away at his home. Born in Fredonia, Wisconsin, he was 77 years old. He received his degree in medicine at St. Louis University and interned at the Jewish Hospital in St. Louis. He began his practice as a lumber company physician

in the sawmill community of Lambrook and continued as a private physician when that community merged with Elaine.

Dr. H. Phipps, Prominent Hot Springs Physician Dies

DR. HAROLD H. PHIPPS, 79 prominent Hot Springs physician who practiced medicine for 53 years in Hot Springs, died at a local hospital. Dr.

Phipps, a native of St. Kitts, British West Indies, came to the United States in 1904 and became a citizen the same year. He received his medical degree at Meharry Medical School in Nashville, Tennessee.

Dr. Phipps was a member of St. Mary's Episcopal Church and active in community and civic affairs. Dr. Phipps was a member of the Arkansas Medical, Dental and Pharmaceutical Association.



P E R S O N A L A N D N E W S I T E M S

Socialized Medicine Failure, Doctor Says

Dr. William A. Snodgrass, Jr., president of the Arkansas Medical Society cited the reputed "costly, tragic failure" of the socialized medicine program in England as example enough that the United States should not embark on a course leading to government control of medical services. Dr. Snodgrass, speaking to the Arkansas Chapter of the Student American Medical Association at the University Medical Center, said that adoption of the King-Anderson Bill, now pending in Congress, would "direct this country toward the same blunder England made 14 years ago" in adopting the program of socialized medicine.

The British system, Dr. Snodgrass said, has come under increasingly heavy criticism from economists, members of Parliament and journalists.

The fourth annual meeting of the South Central Association of Blood Banks held at the Hotel Texas in Fort Worth, Texas, March 9 and 10, 1962 was well attended by blood bankers throughout the six-state area.

In addition to the presentation of scientific papers, a workshop was presented by Hyland Laboratories, Los Angeles, California which provoked many favorable comments.

At the business session on Friday, March 9, the following officers and district directors were elected to serve the Association for 1962:

E. Richard Halden, Jr., M.D., Fort Worth, Texas—President

David E. Soules, Ph.D., Dallas, Texas—President-elect

Donald A. Sutherland, M.D., Dallas, Texas—Vice-president

Mrs. Florence Del Prete, Secretary, Amarillo, Texas

Mr. I. C. Scott, Treasurer, Lafayette, Louisiana

District Directors:

William S. Orr, Jr., M.D., Little Rock, Arkansas
Norma M. Bender, M.S., M.T. (ASCP) B.B.,
Baton Rouge, Louisiana

Robert S. Cooke, Jr., M.D., Hattiesburg, Mississippi

Harold V. Beighley, M.D., Albuquerque, New Mexico

Tom S. Gafford, Jr., M.D., Muskogee, Oklahoma

Raymond St. Peter, M.T. (ASCP), Beaumont, Texas

Department Heads and Officers Elected

The Medical Staff of Dr. Gray's Hospital held a meeting for the purpose of electing officers and

department heads. Dr. Alfred Hathcock was named chief of staff and president of the medical staff. Other officers selected include Dr. Howard Monroe of Mountain View, vice-president; and Dr. Jim Lytle, secretary.

Department heads named were: Dr. W. J. Ketz, chief of surgery; Dr. William P. Gray, chief of medicine, clinical services and pediatrics, Dr. O. J. T. Johnson, chief of general practices; Dr. F. Q. Wyatt, chief of obstetrics and gynecology; and Dr. G. C. Evans, chief of anaesthesiology.

Dr. Moore Receives Service Award

The state Board of the Arkansas Junior Chamber of Commerce named Dr. Berry L. Moore, Jr. of El Dorado as the winner of the Jaycees' annual Distinguished Service Award. Dr. Moore, who is not a Jaycee, received the award for his leadership in a campaign in Union County for a bond issue to build a 100-bed County hospital. After the issue was approved, Dr. Moore was appointed to the hospital Advisory Committee.

Arkansas State Science Fair

The tenth annual State Science Fair was held at Harding College, Searcy, Arkansas. More than 300 senior and junior high school students exhibited projects in the medical, biological, physical and earth sciences and in mathematics. Each of these projects was selected as a winner in a local fair and in one of the eight Regional Fairs held throughout the state.

The Arkansas Science Fair Association, a non-profit corporation chartered in 1959, sponsored a fund-raising drive to send two students and their teachers to Seattle to represent the State in the national competition. Industries, professional societies and individuals were solicited for substantial contributions. The Association has been able to send representatives to Indianapolis and Kansas City the past two years.

More than 10,000 high school and junior high school students in Arkansas prepared science projects for the science fair competition. Many of these students worked on their projects all year and some started during summer vacation months. Through these projects students are learning on their own initiative how science information is obtained. Many are getting their first insight into the science of medicine, others are investigating basic laws of physics, chemistry,

biology, geology or mathematics. All are learning, and the knowledge gained is the measure of success of their science fair project.

Dr. H. W. Thomas Named "Man of the Year"

Dr. H. W. Thomas of Dermott was named Dermott's "Man of the Year" at the Dermott Chamber of Commerce's annual ladies' night banquet. It was the first annual presentation of the award and was made by H. E. (Pete) Raines, originator of the program and chairman of the committee. Dr. Thomas was presented an engraved cup, and was cited for his efforts as a leader for the youth center, member of the Ruth Veasey Educational Foundation, Boy Scout Leader, City Health Officer and Chairman of the Dermott Baptist Church Building Committee. Dr. Thomas is also chief of staff at St. Mary's Hospital, president of the Ram Boosters Assn., and president of the Southeast Arkansas Medical Association.

Dr. Lockhart Joins Holt-Krock Clinic

Dr. William G. Lockhart has joined the staff of Holt-Krock Clinic. He comes to Fort Smith from St. Joseph, Missouri, where he practiced neurological surgery for the past three years. He received his medical degree from the University of Arkansas.

Dr. Bridges Joins Jackson Clinic

Dr. C. W. Jackson of Jackson's Clinic in Judsonia, announced his association with Dr. Olen W. Bridges in the practice of general medicine. The association will be known as Jackson-Bridges Clinic.

Dr. Bridges was reared in Arkadelphia and attended the Arkadelphia Public Schools. His pre-medical and medical training was received at the University of Arkansas. His internship was done at St. Vincent's Infirmary in Little Rock.

Dr. Smith Elected President of Pulaski County Academy of General Practice

Dr. Huie H. Smith of North Little Rock, was elected president of the Pulaski County Academy of General Practice. Dr. Bruce Schratz was elected treasurer.

Dr. Thicksten Heads Staff

Dr. J. N. Thicksten, of Alma, Arkansas, has been named chief of staff for 1962 of Crawford

County Memorial Hospital. Dr. A. E. Thorne who was 1961 chief of staff, is to serve as vice chief. Dr. G. K. Patton was elected as secretary of the staff. Twelve other executive committees were appointed. It was reported that the laboratory, x-ray department, out-patient department, surgery, maternity, and medical patients, each

showed an increase in services rendered over the past year.

New Clinic Is Opened

The new clinic of Dr. Fred Gordy, Jr. and Dr. John W. Sneed, Jr. is now opened. The clinic is located on Locust Avenue at Elm Street, Conway, Arkansas. Dr. Sam Daniel will also practice at the new clinic.



PROCEEDINGS OF SOCIETIES

Dr. Siegel Heads Johnson County Medical Society

Dr. G. R. Siegel was elected president of the Johnson County Medical Society at a meeting at the Clarksville Hospital. Other officers elected were: Dr. Guy Shrigley, vice president and Dr. W. R. Scarborough, secretary-treasurer. Dr. R. H. Manley was named delegate to the State Convention and Dr. Guy Shrigley named alternate delegate.

Medical Assistants Hold Meeting

The Sebastian County Chapter, Arkansas Medical Assistants' Society presented Dr. Harley C. Darnall, Fort Smith physician, as guest speaker, at their dinner meeting. Dr. Darnall subject was "Removal of Foreign Bodies from Bronchia and the Esophagus."

Dr. Thompson Guest Speaker

Dr. Jesse E. Thompson of Dallas was the guest speaker at a dinner meeting of the Bowie-Miller Counties Medical Societies. The meeting was held in the Wadley cafeteria in Texarkana. Dr. Thompson's subject was "Surgical Aspect of Cardiovascular Disease." Dr. Thompson is engaged in the private practice of general and vascular surgery in Dallas. He also is attending sur-

geon at Baylor and Parkland hospitals and clinical assistant professor of surgery at the University of Texas Southwestern Medical School.

CONTRIBUTORS TO THE AMERICAN MEDICAL ASSOCIATION EDUCATION AND RESEARCH FOUNDATION DURING FEBRUARY, 1962:

| | |
|--------------------------------------|---------|
| Kenneth R. Duzan, El Dorado..... | \$10.00 |
| Warren Riley, El Dorado..... | 5.00 |
| Saline County Medical Auxiliary..... | 5.00 |
| | ----- |
| | \$20.00 |

Medical Society Elects New Officers

At the meeting of the Clark County Medical Society, the following officers were elected. President—Dr. P. R. Anderson; Secretary-treasurer—Dr. Robert W. Hunter; Delegate to the State Medical Society—Dr. Lewis B. Tilley; and Alternate delegate—Dr. Eli Gary.

Dr. C. S. Holt Named Officer in Shreveport Society

A Nashville native and honor graduate was honored by the Shreveport Medical Society. Dr. Charles S. Holt, was installed as first vice-president of the Shreveport Medical Society.



NEW MEMBERS

DR. LEONARD R. BOGAEV is a new member of the Craighead-Poinsett County Medical Society. He is a native of Philadelphia, Pennsylvania, and he received his preliminary education from Princeton University. His M.D. degree was obtained in 1954 from the University of Pennsylvania School of Medicine located at Philadelphia. Dr. Bogaev's specialty is urology and his office is located at 812 Cobb Street in Jonesboro, Arkansas.

The Benton County Medical Society announces that DR. CHARLES H. STINNETT has been accepted for membership. Dr. Stinnett is a native of Horatio, Arkansas. His preliminary education was obtained from the University of Arkansas and he received his M.D. degree from the University of Arkansas Medical School in 1959. He is on the staff of Memorial Hospital in Siloam Springs and his office is located at 304 South Maxwell, Siloam Springs, Arkansas.

DR. DUBOSE MURRAY has been accepted for membership in the Garland County Medical Society. He is a native of Memphis, Tennessee, and he received his preliminary education from Emory University located at Atlanta, Georgia. His M.D. degree was obtained from Emory University in 1956. Dr. Murray has practiced in Atlanta, Georgia, and he is now located at 201 Medical Arts Building in Hot Springs, Arkansas. Orthopedic surgery is his specialty.

A new member of the Garland County Medical Society is DR. JERRY L. HOYT. He is a native of Oklahoma City, Oklahoma, and his preliminary education was received at the University of Arkansas. He received his M.D. degree from the

University of Arkansas in 1957; he practiced for four years at the University of Arkansas Medical Center and the Veterans Administration Hospital. He was Chief Resident in medicine at the Veterans Administration Hospital. Dr. Hoyt is now located at 1131 Central in Hot Springs, Arkansas. His specialty is internal medicine.

DR. WILLIAM R. MASHBURN is a new member of the Garland County Medical Society. He is a native of Fayetteville, Arkansas, where he received his preliminary education. His M.D. degree was obtained at the University of Arkansas in 1960. Dr. Mashburn is with the Lon E. Reed Clinic in Hot Springs, and he is a general practitioner.

The Garland County Medical Society announces that DR. ANDREW J. YATES has been added to its roster of members. Dr. Yates is a native of Memphis, Tenn., and he received his preliminary education at the University of Mississippi. He received his M.D. degree from the University of Tennessee located at Memphis, in 1958. He has served in the United States Navy and is now located at 1315 Central in Hot Springs. He is a general practitioner.

ANSWER—What Is Your Diagnosis?

14 MONTHS OLD WHITE FEMALE

Three days before admission the patient was playing with a pan of beans when she suddenly cried out, stopped breathing, and became cyanotic for a minute or two after which she coughed and again appeared normal. When seen here because of respiratory difficulty there was an inspiratory and expiratory stridor and slight circumoral cyanosis.

DIAGNOSIS: Foreign body in the right mainstem bronchus with a ball-valve type of obstruction.

X-RAY FEATURES: The inspiration film is almost normal, there being slight shift of the mediastinum toward the left. On the expiration film, however, the left lung diminishes in volume normally while the right lung remains expanded thus causing marked mediastinal and cardiac shift toward the left. At bronchoscopy a fragment of bean was removed from the right mainstem bronchus. This case illustrates the necessity of both inspiration and expiration films when a foreign body is suspected.



Doctors Wives Entertained by Mrs. Bohnen

The Woman's Auxiliary to the Garland County Medical Society was entertained at the home of Mrs. Loren Bohnen of Hot Springs. Co-hostesses were Mrs. Thomas Durham and Mrs. W. A. Woodcock. Special guest for the meeting was Mrs. Jack Kennedy, of Arkadelphia, National Area Legislative chairman. She was introduced by Mrs. Carl Parkerson, president of the Auxiliary.

Mrs. Kennedy gave an interesting talk on medical legislation, emphasizing the fact that the Kerr-Mills bill has made financial help for medical care available to Arkansas residents. Other medical bills to be presented in Congress this year were also discussed.



BOOK REVIEWS

An Atlas of HEAD and NECK SURGERY, by John M. Lore, Jr., M.D., F.A.C.S., Attending Surgeon, Good Samaritan Hospital, Suffern, New York; Associate Attending Surgeon, Head and Neck Service, Department of Surgery, Saint Clare's Hospital, New York, New York; Consultant Surgeon, Tuxedo Memorial Hospital, Tuxedo, New York, illustrated, pp. 490, published by W. B. Saunders Company, Philadelphia and London, 1962.

This atlas consists of a series of drawings which are extremely well done and a number of outline accompanying text. It is limited to diseases of the head and neck. There are some color illustrations although most are black and white drawings. All in all, this text is quite well done and fulfills its mission although it has a limited scope of interest for the practicing physician. It is recommended only to surgeons particularly interested in the head and neck and to physicians who do some head and neck surgery. AK

A TEXTBOOK OF OBSTETRICS, by Duncan E. Reid, M.D., William Laubert Richardson, Professor of Obstet-

rics, and head of the Department of Obstetrics and Gynecology, Harvard University Medical School; Chief of Staff, Boston Lying-in Hospital, illustrated, pp. 1087, published by W. B. Saunders Company, Philadelphia and London, 1962.

This textbook of obstetrics is excellent. It discusses in a well outlined, clear manner the normal obstetrics and the pathological variations which are seen. The book has a moderate number of illustrations and charts although there is not a profusion of graphic material. There is an excellent section on the toxemia of pregnancy, the effect of pregnancy on other organ systems, and the genitourinary are adequately discussed, although not in great detail. There is a rather short discussion of the newborn infant. There are excellent bibliographies available. In general, this is an outstanding book and heartily recommended to both medical students and practitioners. AK

AN ERRATUM

There was a typographical error in the Teaching Seminar entitled "Digitalis Toxicity", in the February, 1962 issue of the Journal of the Arkansas Medical Society. At the top of column one, page 377, where it is stated, "The average time for disappearance of symptoms in patients receiving digitoxin was 2 or 3 days," digoxin should be substituted for digitoxin.

ANSWER — ELECTROCARDIOGRAM OF THE MONTH

RATE: 110 RHYTHM: Sinus Tachycardia
PR: .16 sec. QRS: .07 sec. QT: .30 sec.

Interpretation: Abnormal. RS-T segment changes suggest pericarditis.

COMMENT: This patient was observed over a period of months and the diagnosis of disseminated lupus erythematosus was confirmed. She had several episodes of clinical symptoms which supported pericarditis and this electrocardiogram was made at the time of one of these episodes. It shows the rather characteristic wide-spread injury current manifested by S-T elevation found with the early stages of acute pericarditis due to any cause. These changes are usually relatively transient and are frequently followed by a return of the S-T segment to the baseline with flattening or inversion of T waves. Following recovery the tracing usually reverts to normal.



Sponsored by Arkansas Tuberculosis Association

DIFFUSE EXOCRINOPATHY (Cystic Fibrosis)

The disease commonly called cystic fibrosis, and sometimes mucoviscidosis, is due to an abnormality in the exocrine glands and the name exocrinopathy is suggested. The pulmonary lesion has the greatest clinical significance.

Gradually it has become apparent that "cystic fibrosis of the pancreas" is not primarily a pancreatic disease; neither is it a cystic or fibrotic disease. The basic mechanism is a disturbance of the function of many of the exocrine glands of the body, structures that secrete their products externally onto an epithelial surface. The common denominator in this disease appears to be an abnormality in the composition of these exocrine secretions and clinical disease results when the secretions are sufficiently altered to cause dysfunction of the organ or organs involved.

The mucous glands of the tracheobronchial tree, the acinar tissue of the pancreas, the biliary canaliculi of the liver, the secretory tissue of the salivary glands, the sweat glands of the skin, and possibly other structures such as the gastrointestinal mucosa may be involved in this disease. After years of observation, D. H. Anderson who introduced the term "cystic fibrosis of the pancreas" now defines cystic fibrosis as a "congenital familial disease characterized by dysfunction of many of the exocrine glands."

The clinical disturbances are variable and related to the type of the secretions and the function of the exocrine gland involved. Apparently the secretions of the pancreas, liver, and tracheobronchial mucosa are too viscous, while the abnormal secretions of other organs, such as the skin and

salivary glands apparently have normal viscosities.

CLINICAL ASPECTS

The disease is not uncommon. Its most significant clinical aspect is the pulmonary lesion, not pancreatic insufficiency. With growing appreciation of the pulmonary aspects of the disease, certain children with bronchitis, "chronic pneumonia," "whooping cough pneumonia" are now correctly diagnosed as having cystic fibrosis. The term mucoviscidosis, introduced in 1945, implied an increased viscosity in the secretions of the tracheobronchial tree, pancreas, and liver. The name had merit until P.A. di Sant' Agnese and associates discovered the electrolyte abnormalities of sweat in patients with this disease, but found no alterations in viscosity. While cystic fibrosis is still the accepted name, exocrinopathy would appear to be a more suitable one.

The exocrinopathy of the mucous secreting glands of the tracheobronchial mucosa produces the most serious effects of the disease. The tracheobronchial tree contains numerous mucous glands in its submucosa. Their secretions are most viscous and are cleared from the tracheobronchial tree only with difficulty. Retention of the viscid material predisposes to infection and airway obstruction, either of which may predominate. During infections of the lower respiratory tract, the thick mucus results in prolongation of illness and favors development of serious complications.

Often cystic fibrosis may be suspected when a child fails to recover promptly from a "chest cold," "flu," or pertussis. Respiratory complaints—primarily cough, sputum production, and susceptibility to recurrent infections—may be mini-

JOHN A. PRIOR, M.D., *The Ohio State Medical Journal*, October, 1961.

may for years only to erupt at or after puberty into a progressive, relentlessly fatal respiratory disease.

Before pancreatic insufficiency is detectable clinically, 90 per cent or more of the pancreatic exocrine function has been lost. If this degree of loss is present at birth, meconium ileus may develop, causing an intestinal obstruction and accounting for approximately 10 per cent of the deaths due to cystic fibrosis. Patients spared meconium ileus will usually die primarily of pulmonary disease.

The most commonly described cystic fibrosis patient is a child who between the second and twelfth month of life develops steatorrhea and chronic recurrent respiratory infections.

SWEAT GLANDS

Parents of children with cystic fibrosis have observed that the children may taste salty when kissed. These children may also have a white, gritty material on their foreheads after exertion, and they may not "do well" in a hot spell.

In 1954 di Sant'Agnese and co-workers demonstrated that the electrolyte depletion was the result of the secretion of sweat containing excessively high concentrations of sodium and chloride. By metabolic balance studies, they demonstrated that the skin was the only route of the abnormal electrolyte loss. They devised a diagnostic procedure, known commonly as the "sweat test," in which the subject is exposed to thermal stimulus and his sweat is collected for analysis of the electrolyte concentration. In cystic fibrosis patients the sweat concentration of sodium and chloride is elevated from two to three times that of normal. There

is no demonstrable correlation between the degree of electrolyte increase and the severity of the associated disease.

The marked variation in the severity of the disease is based upon inherited factors. It may be that the genetic factor can occur unexpressed clinically, thus some relatives of patients have abnormally high sodium and chloride sweat concentrations but no accompanying indications of disease.

DIAGNOSIS AND TREATMENT

The laboratory diagnosis of cystic fibrosis is based primarily upon the sweat test, which is positive in 99 per cent of known cystic fibrosis patients.

As in many other diseases, cystic fibrosis was first reported to be a rare but highly fatal disease. Although usually considered a disease of children, active disease has been found in individuals in the third and fourth decade.

Since the pulmonary disease accompanying cystic fibrosis is responsible for most of the deaths, particular attention to the lungs is indicated. The viscid secretions may be rendered thinner by the use of expectorants such as the iodides. Pancreatic streptokinase and streptodornase may be helpful in liquefying secretions.

For the control of infection, intensive courses of broad spectrum antibiotics each month for four or five days continuously are often helpful. In some instances, virtually year-round antibiotic therapy may be necessary to effect significant improvement. Cultures should be made of the sputum at regular intervals. Changes in the bacterial flora may dictate changes in antibacterial therapy.

INDEX

JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Volume 58

June, 1961 — May, 1962

ABBREVIATIONS—

(O) Original Articles; (SP) Special Articles;
(E) Editorial; (OB) Obituary; (R) Resolution.

— A —

Abraham, James H. (O)
Accreditation of Hospitals, Facts All Physicians Should Know Concerning (O)
Acne Vulgaris (O) 241
Address, President's (SP) 1
Aged, Hospital Discharge Planning for the (O) 193
Altman, Marvin (O)
Annual Committee Reports (SP) 446
Arkansas Child Development Center, Report of First Four Years of Operation of The (O) 381
Arkansas Practical Nurses Association, Speech Made at Blytheville to the (SP) 139
Arteriosclerotic Occlusive Disease of the Aorta and Major Arteries, Current Concepts in the Surgical Treatment of (O) 178
Atkinson, R. M. (OB) 347

— B —

Babinski, A Physiological Analysis of the Sign of (O) 416
Bailey, H. A. "Ted", Jr. (O) 53, 409
Beahrs, Oliver H. (O) 322
Beebe, Charles B. (OB) 347
Bell, Houston L. (O) 403
Berry, Frederick B. (O) 370
Blind Patients, A Service For Your (O) 239
Blood Program, The Red Cross (O) 384
Blood, Tired (E) 114
Brooksher, W. R., Jr. (O) 424
Brown, Herman L. (OB) 163
Brown, Willis E. (O) 276, 331
Bulloch, Robert T. (O) 372
Bunch, William L., Jr. (O) 112
Bungart, Carl (OB) 209

— C —

Cadavers, The Quest for, Since the Beginning of Anatomical Studies: Any Body (O) 183
Cancer, A Major Unsolved Problem (E) 154
Carcinoma of the Lip and in the Oral Cavity, The Place of Radical Cervical Dissection in the Treatment of (O) 322
Care of the Patient, The (SP) 115
Cervical Stump, The Management of the (O) 331
Chaffin, Curtis Wood (OB) 121
Chaplaincy, The New Face of The (O) 327
Civil Defense Emergency Hospital, The (O) 245
Colitis, Chronic Ulcerative (O) 247
Conard, James M. (O) 327
Cooley, Denton A. (O) 178
Cross, J. B. (O) 239
Cushing's Syndrome in an Adolescent Girl (O) 285

— D —

Davenport, Rachael (O) 193
Davis, J. C. (O) 193
Deed, Eleanor P. (O) 59
Dermatology Griseofulvin, What's New in (O) 56
Digitalis Toxicity (O) 372

Dilday, T. J., Jr. (O) 330
Dillaha, Calvin J. (O) 56, 241
Doctor Citizen (O) 175
Downs, Ralph A. (O) 367
Drowning, Accidental Deaths from in Arkansas (O) 65

— E —

Eberle, Walter (OB) 162
Electrolytes—The Common Denominator in Hypertension? (O)
Ellison, Eugene T. (O) 191
Esophagitis, Subacute Erosive (O)
Evans, Rowland Hill (OB) 38
Eye Surgery, What's New In (O) 140

— F —

Farris, Guy R. (O)
Felix, Robert H. (O) 223
Fergusson, John P. (OB) 122
Fish, Stewart A. (O) 271, 361
Fisher, D. A. (O) 141
Fusimotor Nerve System In Man, Function of the (O) 418

— G —

Gardner, Lycurgus (OB) 346
General Practice (O)
Gephardt, M. C. (O) 49
Geriatrics and the Community General Hospital (O)
Gibson, Sam T. (O) 384
Gordon, Frank (OB) 255

— H —

Haddy, F. J. (O)
Hand Problems, Lesser (O) 420
Hanlon, Thomas J. (O) 49
Hearing Screening in Arkansas Schools (O) 297
Heart Block, Mechanical Treatment of (O) 370
Hemochromatosis, Is a Variant of Cirrhosis (O) 299
Hernia, The Short-Esophagus Type of Esophageal Hiatal (O) 357
Higgins, Homer A. (OB) 38
Hour, The Eleventh (O) 87
Hyatt, C. Lewis (E) 435
Hypertension, Renal (O) 367
Hypoglycemic Agents, Oral (O) 424
Hypoglycemia During Infancy and Childhood, The Diagnosis and Management of (O) 141

— I —

Immunizations For International Travel (O) 433
Injuries, Spinal Cord and Paraplegia (O) 102
International Relations and Medicine (O) 339

— J —

James, David H., Jr. (O) 285
Jansen, G. Thomas (O) 56, 241
Jaundice, Constitutional Non-Hemolytic Forms of (O) 290
Jones, Kenneth G. (O) 183, 420
Juniper, Kerrison, Jr. (O) 290

— K —

Kahn, Alfred, Jr. (E) 33-114-154-247-299
Kolb, James M. (SP) 138
Kuykendall, Sam J. (O) 67

— L —

Landau, William M. (O) 416, 418
 Lauck, Chester (O) 87
 Legal Problems Involving Medical Records (O) 237
 Leptospirosis In Arkansas (O) 152
 Lich, Robert, Jr. (O) 127

— M —

Marques, Vincent H. (OB) 209
 Martin, Frederick N. (O) 53
 McCullough, A. W. (OB) 209 (R) 198
 McLeod, Gaylord Floyd (OB) 38
 Medical Center, The Genealogy of the (O) 276
 Member of Board of Trustees Writes President-Elect of
 AMA a Letter (E) 199
 Middleton, Benjamin Crabb (OB) 310
 Miller, James E. (O) 90
 Mobley, Henry E. (OB) 38
 Monfort, J. J. (SP) 1
 Morris, Harry D. (O) 45
 Morrow, John P., Jr. (O) 94
 Myelofibrosis, Primary (O) 49

— N —

Nettles, John B. (O) 331
 North By West (O) 94
 Norton, Joseph A. (O) 197

— O —

Obstetrics and Gynecology, What's New in (O) 191
 Obstructive Diseases of the Urinary Tract in Children (O)
 127
 Open Heart Surgery (O) 67
 Osteoarthritis of the Hip (O) 45
 Overbeck, H. W. (O)

— P —

Paraplegia, Injuries, Spinal Cord and (O) 102
 Parson, George W. (OB) 469
 Pathology (O) 330
 Peacock, A. L. (OB) 347
 Pedicle Graft For Transmeatal and Endaural Tympano-
 plasty (O) 403
 Phobic Syndrome, Its Nature and Treatment (O) 230
 Pharmaceutical Association, Resolutions of The (R) 113
 Physician Image, The (E) 435
 Pneumonia, Staphylococcal (O) 59
 Pregnancy, Management of Medical Complications of (O)
 361
 Preliminary Program, 86th Annual Session, Arkansas Med-
 ical Society (SP) 437
 Proceedings, 37th Annual Session Woman's Auxiliary to the
 Arkansas Medical Society (SP) 31
 Proceedings, 85th Annual Session Arkansas Medical Society
 (SP) 5

Pseudo-Pseudohypoparathyroidism, A Case of (O) 106
 Psychiatric Principles In General Practice, The Utilization
 of (O) 83
 Psychopharmacology and Psychiatry (O) 223
 Psychotherapy, Reeducational (O) 131

— R —

Radical Cervical Dissection in the Treatment of Carcinoma
 of the Lip and in the Oral Cavity, The Place of (O) 322
 Records Medical, Legal Problems Involving (O) 237
 Richardson, Fount (R) 383 (OB) 397
 Robins, R. B. (E) 199 (O) 339

— S —

Schmidt, Herbert W. (O) 357
 Service Areas of the Medical Society (E) 33
 Smith, Margaret H. D. (O) 319
 Sparks, Albert Reuel (OB) 74 (R) 153
 Stanford, John Mitchell (OB) 346
 Stapedectomy With Vein Graft and Polyethylene Prosthesis
 (O) 409
 Staphylococcal Infections, The Problem of (O) 319
 Stecher, James L. (O) 106
 Steele, William L. (O) 102
 Strabismus, The Diagnosis of (O) 90
 Strokes, Reactive States Following (O) 265

— T —

Terhune, William B. (O) 131, 230
 Tetanus In Arkansas (O) 337
 Tympanic Membrane Perforations, The Use of Vein Graft
 Technique for Closure of (O) 53
 Tympanoplasty, Endaural, Pedicle Graft For Transmeatal
 (O) 403
 Typhoid Fever (O) 112

— U —

Ullman, Montague (O) 265
 Urinary Tract, Obstructive Diseases of in Children (O) 127

— V —

Vein Graft Technique for Closure of Tympanic Membrane
 Perforations, The Use of (O) 53
 Vision Screening in Arkansas Schools (O) 197
 Vulva, Benign and Malignant Diseases of the (O) 271

— W —

Warren, Eugene R. (O) 237
 Watkins, John G. (O) 110
 Watters, T. A. (O) 83
 Weddington, Ralph E. (OB) 209
 Weintraub, Allen (O)
 Witten, Carroll L. (O) 175

— Y —

Yeider, Jeanne W. (O) 193

THIS BOOK IS DUE ON THE LAST DATE STAMPED BELOW

| | | |
|---|---|--|
| <p>SEP 17 1964</p> <p>INTERLIBRARY LOAN</p> <p><u>7</u> DAYS AFTER RECEIPT</p> <p>U. T. GILKINSON</p> <p>SEP 28 1964</p> <p>7 DAY
MAY 29 1965
JUN 22 1965</p> | <p>DEC 3 - 1965</p> <p>INTERLIBRARY LOAN ✓</p> <p><u>7</u> DAYS AFTER RECEIPT</p> <p>C. H. Bepko</p> <p>RETURNED</p> <p>DEC 17 1965</p> | |
|---|---|--|

51.

162147

